CALIFORNIA HIGH-SPEED TRAIN

Project Environmental Impact Report/Environmental Impact Statement

FINAL

Merced to Fresno Section Project EIR/EIS

Volume III:

Section L1 – Roadway and Grade Separation Plans

Hybrid Alternative with Ave 21 Wye

April 2012

CALIFORNIA High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
				GENERAL		
		B4990-B	AVE 21 HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 1 OF 3
		B4991-B	AVE 21 HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 2 OF 3
		B4992-B	AVE 21 HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 3 OF 3
		B4993-B	AVE 21 HYBRID	GENERAL	ABBREVIATIONS, SYMBOLS & NOTES	SHEET 1 OF 1
		B5000-B	AVE 21 HYBRID		INDEX MAP	SHEET 1 OF 2
		B5001-B	AVE 21 HYBRID		INDEX MAP	SHEET 2 OF 2
		CB5000-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 16 ALT 1	KEY MAP	SHEET 1 OF 1
		CB5001-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 17 1/2	KEY MAP	SHEET 1 OF 1
		CB5002-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 22	KEY MAP	SHEET 1 OF 1
		CB5003-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 21 1/2	KEY MAP	SHEET 1 OF 1
		CT4990-B	AVE 21 HYBRID	GRADE SEPARATIONS	TYPICAL CROSS SECTIONS	SHEET 1 OF 1
		CT4992-B	AVE 21 HYBRID		GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN	SHEET 1 OF 2
		CT4993-B	AVE 21 HYBRID		GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN	SHEET 2 OF 2
				AVENUE 21 HYBRID - (LAYOUT)		
1		CT0001-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 9	LAYOUT	SHEET 1 OF 3
1		CT0002-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 9	LAYOUT	SHEET 2 OF 3
1		CT0003-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 9	LAYOUT	SHEET 3 OF 3
2		CT0004-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 10	LAYOUT	SHEET 1 OF 3
2		CT0005-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 10	LAYOUT	SHEET 2 OF 3
2		CT0006-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 10	LAYOUT	SHEET 3 OF 3
3		CT0007-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 11	LAYOUT	SHEET 1 OF 3
3		CT0008-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 11	LAYOUT	SHEET 2 OF 3
3		CT0009-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 11	LAYOUT	SHEET 3 OF 3
4		CT0010-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 12	LAYOUT	SHEET 1 OF 3
4		CT0011-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 12	LAYOUT	SHEET 2 OF 3
4		CT0012-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 12	LAYOUT	SHEET 3 OF 3
5		CT0013-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 13	LAYOUT	SHEET 1 OF 4
5		CT0014-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 13	LAYOUT	SHEET 2 OF 4
5		CT0015-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 13	LAYOUT	SHEET 3 OF 4
5		CT0016-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 13	LAYOUT	SHEET 4 OF 4
6		CT0017-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 15	LAYOUT	SHEET 1 OF 3
6		CT0018-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 15	LAYOUT	SHEET 2 OF 3
6		CT0019-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 15	LAYOUT	SHEET 3 OF 3
7		CT0020-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	LAYOUT	SHEET 1 OF 3
7		CT0021-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	LAYOUT	SHEET 2 OF 3
7		CT0022-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	LAYOUT	SHEET 3 OF 3
9		CT0026-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 17	LAYOUT	SHEET 1 OF 3
9		CT0027-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 17	LAYOUT	SHEET 2 OF 3
9		CT0028-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 17	LAYOUT	SHEET 3 OF 3
10		CT0029-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 27	LAYOUT	SHEET 1 OF 3
10		CT0030-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 27	LAYOUT	SHEET 2 OF 3
10		CT0031-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 27	LAYOUT	SHEET 3 OF 3
11		CT0032-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 26	LAYOUT	SHEET 1 OF 3
11		CT0033-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 26	LAYOUT	SHEET 2 OF 3
11		CT0034-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 26	LAYOUT	SHEET 3 OF 3
90		CT0066-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 20	LAYOUT	SHEET 1 OF 3
90		CT0067-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 20	LAYOUT	SHEET 2 OF 3
90		CT0068-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 20	LAYOUT	SHEET 3 OF 3
91		CT0069-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 20 1/2	LAYOUT	SHEET 1 OF 3
91		CT0070-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 20 1/2	LAYOUT	SHEET 2 OF 3
91		CT0071-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 20 1/2	LAYOUT	SHEET 3 OF 3
92		CT0073-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 22	LAYOUT	SHEET 1 OF 3
92		CT0074-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 22	LAYOUT	SHEET 2 OF 3
92		CT0075-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 22	LAYOUT	SHEET 3 OF 3
25		CT0076-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 20	LAYOUT	SHEET 1 OF 3
25		CT0077-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 20	LAYOUT	SHEET 2 OF 3
25		CT0078-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 20	LAYOUT	SHEET 3 OF 3
26		CT0079-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 18 1/2	LAYOUT	SHEET 1 OF 3
26		CT0080-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 18 1/2	LAYOUT	SHEET 2 OF 3
26		CT0081-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 18 1/2	LAYOUT	SHEET 3 OF 3
65		CT0146-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 7	LAYOUT	SHEET 1 OF 3
65		CT0147-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 7	LAYOUT	SHEET 2 OF 3
65		CT0148-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 7	LAYOUT	SHEET 3 OF 3
64		CT0149-A	BNSF MERCED CONNECTION - (AVE 21 HYBRID)	GRADE SEPARATION - G STREET	LAYOUT	SHEET 1 OF 1
12		CT5000-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 16	LAYOUT	SHEET 1 OF 4
12		CT5001-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 16	LAYOUT	SHEET 2 OF 4
12		CT5002-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 16	LAYOUT	SHEET 3 OF 4
12		CT5003-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 16	LAYOUT	SHEET 4 OF 4

REV	DATE	BY	CHK	APP	DESCRIPTION
2	02/24/12	RG			
1	12/28/11	RG			

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID
GENERAL
INDEX OF DRAWINGS
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. B4990-B
SCALE NONE
SHEET NO. ### OF ###

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LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
13		CT5004-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 17 1/2	LAYOUT	SHEET 1 OF 4
13		CT5005-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 17 1/2	LAYOUT	SHEET 2 OF 4
13		CT5006-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 17 1/2	LAYOUT	SHEET 3 OF 4
13		CT5007-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 17 1/2	LAYOUT	SHEET 4 OF 4
14		CT5016-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 22	LAYOUT	SHEET 1 OF 3
14		CT5017-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 22	LAYOUT	SHEET 2 OF 3
14		CT5018-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 22	LAYOUT	SHEET 3 OF 3
15		CT5019-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 21 1/2	LAYOUT	SHEET 1 OF 4
15		CT5020-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 21 1/2	LAYOUT	SHEET 2 OF 4
15		CT5021-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 21 1/2	LAYOUT	SHEET 3 OF 4
15		CT5022-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 21 1/2	LAYOUT	SHEET 4 OF 4
AVENUE 21 HYBRID - (PROFILE)						
		CT5700-B	AVE 21 HYBRID	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 1 OF 4
		CT5701-B	AVE 21 HYBRID	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 2 OF 4
		CT5702-B	AVE 21 HYBRID	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 3 OF 4
		CT5703-B	AVE 21 HYBRID	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 4 OF 4
1		CT1000-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 9	PROFILE	SHEET 1 OF 3
1		CT1001-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 9	PROFILE	SHEET 2 OF 3
1		CT1002-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 9	PROFILE	SHEET 3 OF 3
2		CT1003-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 10	PROFILE	SHEET 1 OF 3
2		CT1004-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 10	PROFILE	SHEET 2 OF 3
2		CT1005-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 10	PROFILE	SHEET 3 OF 3
3		CT1006-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 11	PROFILE	SHEET 1 OF 3
3		CT1007-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 11	PROFILE	SHEET 2 OF 3
3		CT1008-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 11	PROFILE	SHEET 3 OF 3
4		CT1009-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 12	PROFILE	SHEET 1 OF 3
4		CT1010-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 12	PROFILE	SHEET 2 OF 3
4		CT1011-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 12	PROFILE	SHEET 3 OF 3
5		CT1012-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 13	PROFILE	SHEET 1 OF 3
5		CT1013-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 13	PROFILE	SHEET 2 OF 3
5		CT1014-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 13	PROFILE	SHEET 3 OF 3
6		CT1015-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 15	PROFILE	SHEET 1 OF 3
6		CT1016-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 15	PROFILE	SHEET 2 OF 3
6		CT1017-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 15	PROFILE	SHEET 3 OF 3
7		CT1018-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	PROFILE	SHEET 1 OF 3
7		CT1019-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	PROFILE	SHEET 2 OF 3
7		CT1020-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	PROFILE	SHEET 3 OF 3
9		CT1024-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 17	PROFILE	SHEET 1 OF 3
9		CT1025-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 17	PROFILE	SHEET 2 OF 3
9		CT1026-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 17	PROFILE	SHEET 3 OF 3
10		CT1029-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 27	PROFILE	SHEET 1 OF 3
10		CT1030-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 27	PROFILE	SHEET 2 OF 3
10		CT1031-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 27	PROFILE	SHEET 3 OF 3
11		CT1032-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 26	PROFILE	SHEET 1 OF 3
11		CT1033-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 26	PROFILE	SHEET 2 OF 3
11		CT1034-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 26	PROFILE	SHEET 3 OF 3
90		CT1063-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 20	PROFILE	SHEET 1 OF 3
90		CT1064-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 20	PROFILE	SHEET 2 OF 3
90		CT1065-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 20	PROFILE	SHEET 3 OF 3
91		CT1066-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 20 1/2	PROFILE	SHEET 1 OF 3
91		CT1067-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 20 1/2	PROFILE	SHEET 2 OF 3
91		CT1068-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 20 1/2	PROFILE	SHEET 3 OF 3
92		CT1069-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 22	PROFILE	SHEET 1 OF 3
92		CT1070-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 22	PROFILE	SHEET 2 OF 3
92		CT1071-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 22	PROFILE	SHEET 3 OF 3
25		CT1072-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 20	PROFILE	SHEET 1 OF 3
25		CT1073-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 20	PROFILE	SHEET 2 OF 3
25		CT1074-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 20	PROFILE	SHEET 3 OF 3
26		CT1075-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 18 1/2	PROFILE	SHEET 1 OF 3
26		CT1076-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 18 1/2	PROFILE	SHEET 2 OF 3
26		CT1077-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 18 1/2	PROFILE	SHEET 3 OF 3
65		CT1146-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 7	PROFILE	SHEET 1 OF 3
65		CT1147-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 7	PROFILE	SHEET 2 OF 3
65		CT1148-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 7	PROFILE	SHEET 3 OF 3
64		CT1149-A	BNSF MERCED CONNECTION - (AVE 21 HYBRID)	GRADE SEPARATION - G STREET	PROFILE	SHEET 1 OF 1
12		CT6000-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 16	PROFILE	SHEET 1 OF 4
12		CT6001-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 16	PROFILE	SHEET 2 OF 4
12		CT6002-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 16	PROFILE	SHEET 3 OF 4
12		CT6003-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 16	PROFILE	SHEET 4 OF 4

REV	DATE	BY	CHK	APP	DESCRIPTION
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID
GENERAL
INDEX OF DRAWINGS
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. B4991-B
SCALE NONE
SHEET NO. ### OF ###

USER=ReyesC1 4/5/2012 11:01:09 AM \\usstc2fp001\projects\60022962\task-03_merced-fresno\cadd\civil\design\santa clara\delosreyesc\15% roadway revisions\vol iii final submittal\roadway\sheet\Package 4 -

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
13		CT6004-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 17 1/2	PROFILE	SHEET 1 OF 4
13		CT6005-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 17 1/2	PROFILE	SHEET 2 OF 4
13		CT6006-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 17 1/2	PROFILE	SHEET 3 OF 4
13		CT6007-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	GRADE SEPARATION - ROAD 17 1/2	PROFILE	SHEET 4 OF 4
14		CT6016-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 22	PROFILE	SHEET 1 OF 3
14		CT6017-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 22	PROFILE	SHEET 2 OF 3
14		CT6018-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 22	PROFILE	SHEET 3 OF 3
15		CT6019-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 21 1/2	PROFILE	SHEET 1 OF 5
15		CT6020-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 21 1/2	PROFILE	SHEET 2 OF 5
15		CT6021-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 21 1/2	PROFILE	SHEET 3 OF 5
15		CT6022-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 21 1/2	PROFILE	SHEET 4 OF 5
15		CT6023-B	UPRR/SR99 WYE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 21 1/2	PROFILE	SHEET 5 OF 5
		CT1477A	BNSF MAIN LINE	AVENUE 24/SR 152/AVENUE 21	ROAD 11 GRADE SEPARATION	PLAN AND PROFILE
		CT1478A	BNSF MAIN LINE	AVENUE 24/SR 152/AVENUE 21	ROAD 11 GRADE SEPARATION	PLAN AND PROFILE
		CT1481A	BNSF MAIN LINE	AVENUE 24/SR 152/AVENUE 21	ROBERTSON BLVD GRADE SEPARATION	PLAN AND PROFILE
		CT1482A	BNSF MAIN LINE	AVENUE 24/SR 152/AVENUE 21	ROBERTSON BLVD GRADE SEPARATION	PLAN AND PROFILE
		CT1484A	BNSF MAIN LINE	AVENUE 24/SR 152/AVENUE 21	ROAD 14 GRADE SEPARATION	PLAN AND PROFILE
		CT1485A	BNSF MAIN LINE	AVENUE 24/SR 152/AVENUE 21	ROAD 14 GRADE SEPARATION	PLAN AND PROFILE
		CT1926	BNSF MAIN LINE	AVENUE 21	PLAN AND PROFILE	ROAD 9 / HEMLOCK ROAD GRADE SEPARATION
		CT1927	BNSF MAIN LINE	AVENUE 21	PLAN AND PROFILE	ROAD 9 / HEMLOCK ROAD GRADE SEPARATION
		CT1928	BNSF MAIN LINE	AVENUE 21	PLAN AND PROFILE	ROAD 9 / HEMLOCK ROAD GRADE SEPARATION
		CT1929	BNSF MAIN LINE	AVENUE 21	PLAN AND PROFILE	ROAD 11 GRADE SEPARATION
		CT1930	BNSF MAIN LINE	AVENUE 21	PLAN AND PROFILE	ROAD 11 GRADE SEPARATION
		CT1931	BNSF MAIN LINE	AVENUE 21	PLAN AND PROFILE	ROAD 11 GRADE SEPARATION
		CT1932	BNSF MAIN LINE	AVENUE 21	PLAN AND PROFILE	ROBERTSON BLVD GRADE SEPARATION
		CT1933	BNSF MAIN LINE	AVENUE 21	PLAN AND PROFILE	ROBERTSON BLVD GRADE SEPARATION
		CT1934	BNSF MAIN LINE	AVENUE 21	PLAN AND PROFILE	ROBERTSON BLVD GRADE SEPARATION
		CT1935	BNSF MAIN LINE	AVENUE 21	PLAN AND PROFILE	ROAD 14 GRADE SEPARATION
		CT1936	BNSF MAIN LINE	AVENUE 21	PLAN AND PROFILE	ROAD 14 GRADE SEPARATION
		CT1937	BNSF MAIN LINE	AVENUE 21	PLAN AND PROFILE	ROAD 14 GRADE SEPARATION

ABBREVIATIONS

ALIGNMENT

HORIZONTAL

BC	BEGINNING OF CURVE
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUNT CURVES
PI	POINT OF INTERSECTION OF TWO TANGENTS
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
V, DS	DESIGN VELOCITY IN MILES PER HOUR

VERTICAL

BVC	BEGIN OF VERTICAL CURVE
EVC	END OF VERTICAL CURVE
PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

ALT	ALTERNATIVE
AVE	AVENUE
BB	BEGIN BRIDGE
BEG	BEGIN
BLVD	BOULEVARD
℄	CENTER LINE
CL	CENTERLINE, CLASS
CLR	CLEAR
COL	COLUMN
DWG	DRAWING
EB	END BRIDGE
ELEV	ELEVATION
EQ	EQUATION
ES	EDGE OF SIDEWALK
ETW	EDGE OF TRAVELED WAY
EXIST(E)	EXISTING
FL	FLOW LINE
HORIZ	HORIZONTAL
HP	HINGE POINT
HST	HIGH SPEED TRAIN
HWY	HIGHWAY
IC	INTERCHANGE
IN	INCH
L	LENGTH
LT	LEFT
MBGR	METAL BEAM GUARD RAIL
ML	MAINLINE
MPH	MILES PER HOUR
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
No, NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVERHEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL, FG	PROFILE GRADE LINE
RET	RETAINING
RR	RAILROAD
RD	ROAD
R/W	RIGHT OF WAY
RT	RIGHT
SB	SOUTH BOUND
SHLD	SHOULDER
SR	STATE ROUTE
SHT	SHEET
SS	SANITARY SEWER
SSD	STOPPING SIGHT DISTANCE
ST	STREET
STA	STATION
STD	STANDARD
SD	STORM DRAIN
STRUCT, STR	STRUCTURE
T	TANGENT
TEL	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE
TOR	TOP OF RAIL
TK	TRACK
TYP	TYPICAL
TBD	TO BE DETERMINED
TF	TELECOMMUNICATIONS FIBER OPTIC
UPRR	UNION PACIFIC RAILROAD
VAR	VARIES
V VERT	VERTICAL
W	WATER, WEST

SYMBOLS

	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY OR EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
G16	GAS LINE (16")
TC	COMMUNICATION LINE
W	WATER LINE
FO	FIBER OPTIC LINE
E	ELECTRICAL LINE
	ELECTRICAL TOWER
S	SEWER LINE
SD	STORM DRAIN LINE
O	FUEL LINE
TC	TELEPHONE LINE
P12	PETROLEUM LINE (12")
(OH)	OVERHEAD
	NORTH ARRROW
	PVI
	MBGR
	DIRECTION OF TRAVEL
250	PROPOSED CONTOUR

REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID
GENERAL
ABBREVIATIONS, SYMBOLS AND NOTES
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B4993-B
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SHEET NO. ### OF ###

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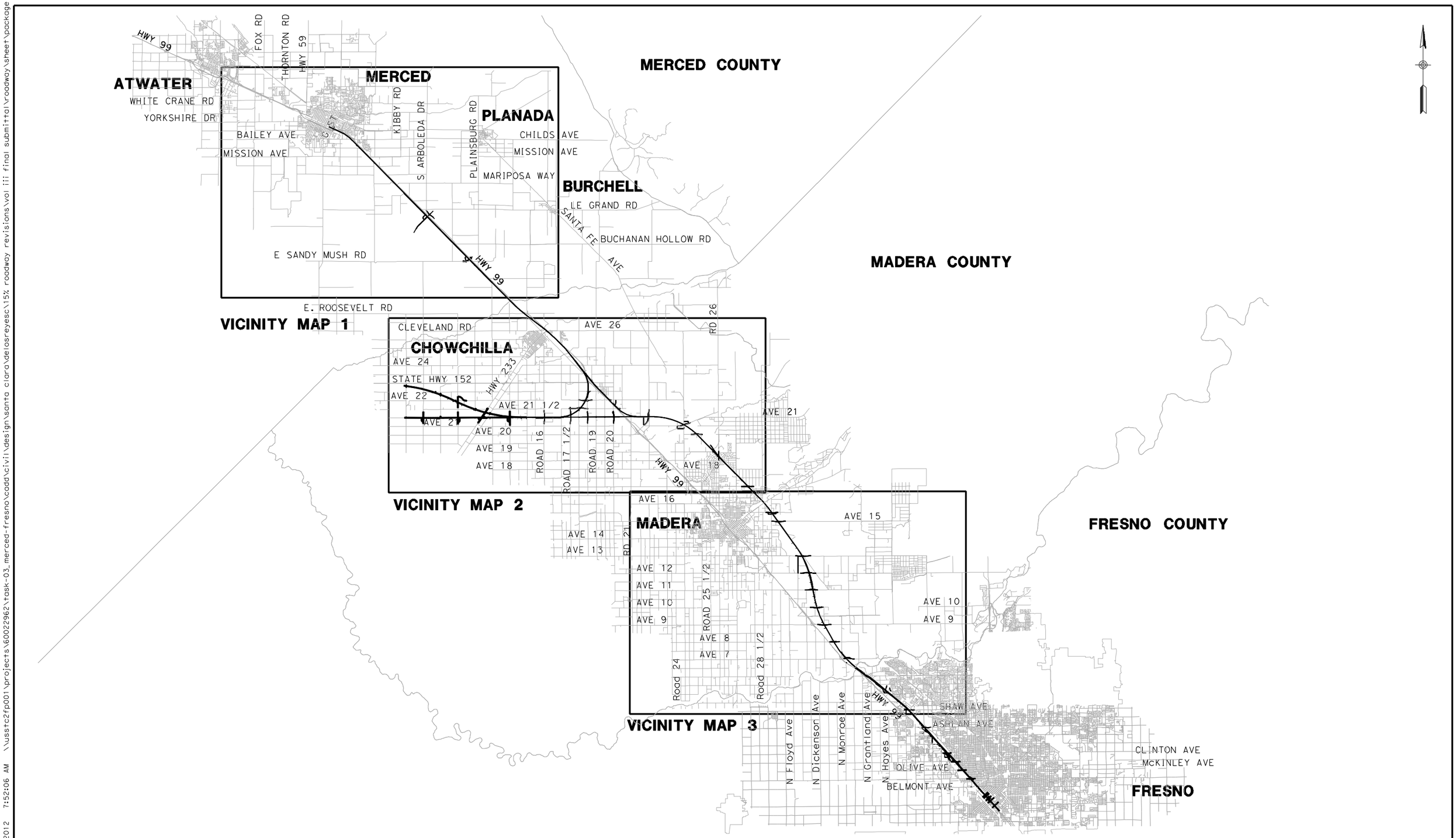

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1	12/12/2011	RG			

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID

INDEX MAP
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. B5000-B
SCALE NO SCALE
SHEET NO. ### OF ###

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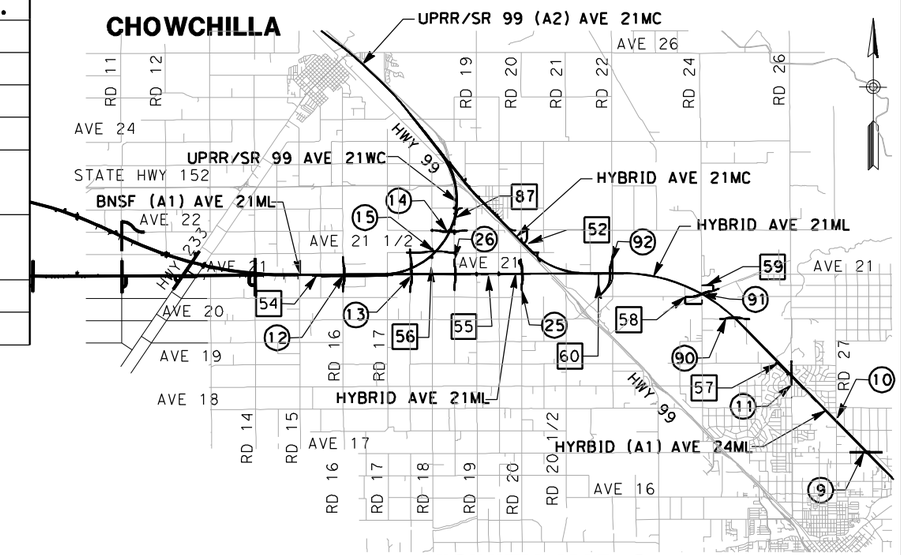
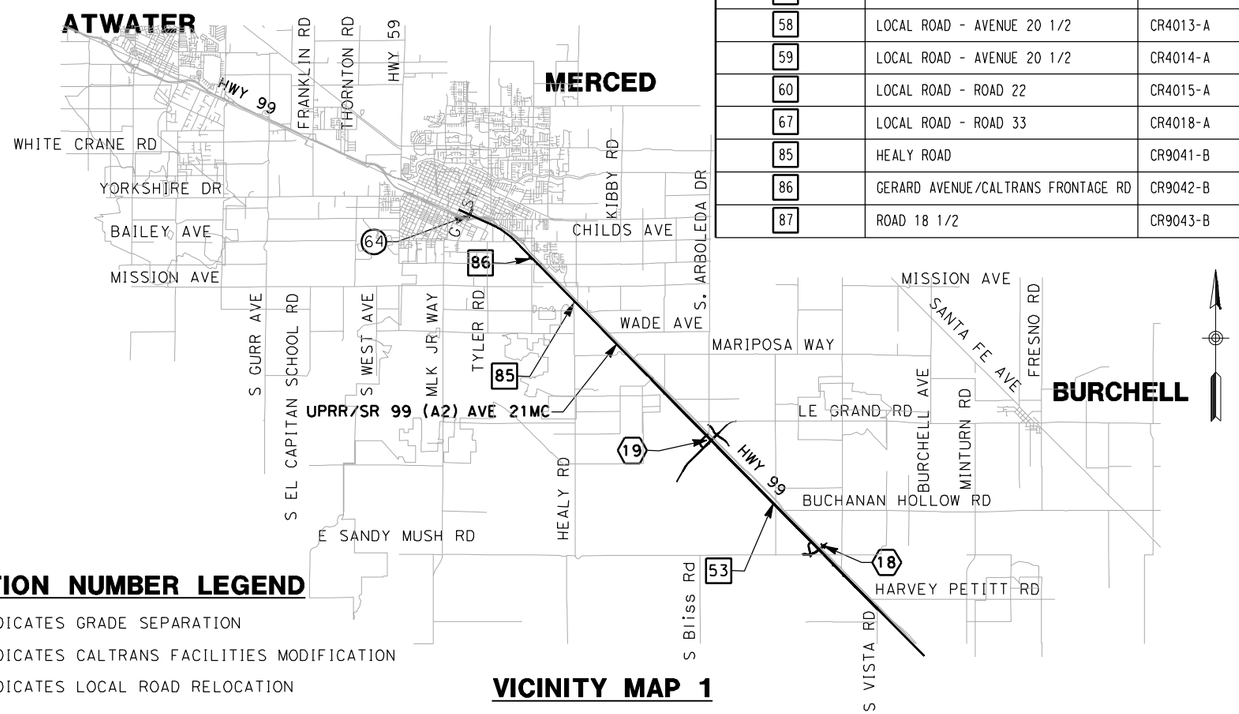
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
1	GRADE SEPARATION - AVENUE 9	CT0001-A - CT0003-A	ST1001
2	GRADE SEPARATION - AVENUE 10	CT0004-A - CT0006-A	ST1002
3	GRADE SEPARATION - AVENUE 11	CT0007-A - CT0009-A	ST1003
4	GRADE SEPARATION - AVENUE 12	CT0010-A - CT0012-A	ST1004
5	GRADE SEPARATION - AVENUE 13	CT0013-A - CT0016-A	ST1005
6	GRADE SEPARATION - AVENUE 15	CT0017-A - CT0019-A	ST1006
7	GRADE SEPARATION - AVENUE 15 1/2	CT0020-A - CT0022-A	ST1007
9	GRADE SEPARATION - AVENUE 17	CT0026-A - CT0028-A	ST1009
10	GRADE SEPARATION - ROAD 27	CT0029-A - CT0031-A	ST1010
11	GRADE SEPARATION - ROAD 26	CT0032-A - CT0034-A	ST1011
12	GRADE SEPARATION - ROAD 16	CT5000-B - CT5003-B	ST1101
13	GRADE SEPARATION - ROAD 17 1/2	CT5004-B - CT5007-B	ST1102 - ST1103
14	GRADE SEPARATION - AVENUE 22	CT5016-B - CT5018-B	ST1106
15	GRADE SEPARATION - AVENUE 21 1/2	CT5019-B - CT5022-B	ST1115
25	GRADE SEPARATION - ROAD 20	CT0076-A - CT0078-A	ST1026
26	GRADE SEPARATION - ROAD 18 1/2	CT0079-A - CT0081-A	ST1027
64	GRADE SEPARATION - G STREET	CT0149-A	ST1180

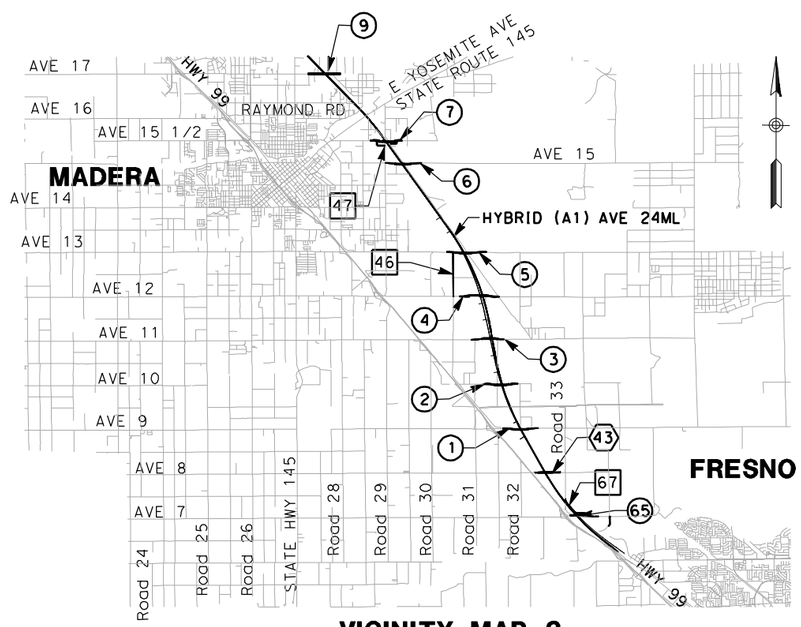
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
65	GRADE SEPARATION - AVENUE 7	CT0146-A - CT0148-A	ST1070
90	GRADE SEPARATION - AVENUE 20	CT0066-A - CT0068-A	ST1090
91	GRADE SEPARATION - AVENUE 20 1/2	CT0069-A - CT0071-A	ST1091
92	GRADE SEPARATION - ROAD 22	CT0073-A - CT0075-A	ST1092
18	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	CT7034-B - CT7036-B	ST1113
19	GRADE SEPARATION - LE GRAND RD INTERCHANGE	CT7037-B - CT7043-B	ST1114
43	CALTRANS - AVENUE 8	CT2001-A - CT2003-A	ST1000
46	LOCAL ROAD - ROAD 30 1/2	CR4000-A	
47	LOCAL ROAD - ROAD 29	CR4001-A	
52	FAIRMEAD BLVD	CR9017-B - CR9020-B	
53	PROPOSED WEST FRONTAGE ROAD	CR9021-B - CR9028-B	
54	AVENUE 21 AVENUE 21	CR9029-B CR9032-B - CR9033-B	
55	ROAD 19 & ROAD 19 1/2	CR9040-B	
56	ROAD 18	CR9035-B	
57	LOCAL ROAD - HANOVER RD	CR4012-A	
58	LOCAL ROAD - AVENUE 20 1/2	CR4013-A	
59	LOCAL ROAD - AVENUE 20 1/2	CR4014-A	
60	LOCAL ROAD - ROAD 22	CR4015-A	
67	LOCAL ROAD - ROAD 33	CR4018-A	
85	HEALY ROAD	CR9041-B	
86	GERARD AVENUE/CALTRANS FRONTAGE RD	CR9042-B	
87	ROAD 18 1/2	CR9043-B	



VICINITY MAP 2



VICINITY MAP 1



VICINITY MAP 3

9000 0 9000 18000
GRAPHIC SCALE

LOCATION NUMBER LEGEND

(X) - INDICATES GRADE SEPARATION

⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION

[X] - INDICATES LOCAL ROAD RELOCATION

REV	DATE	BY	CHK	APP	DESCRIPTION
2	02/24/2012	RG			
1	12/12/2011	RG			

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DATE 06/30/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID

INDEX MAP
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. B5001-B
SCALE NO SCALE
SHEET NO. ### OF ###

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200 0 200 400
1"=200'

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MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16 ALT 1
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB5000-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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200 0 200 400
1"=200'

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CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB5001-B
SCALE AS SHOWN
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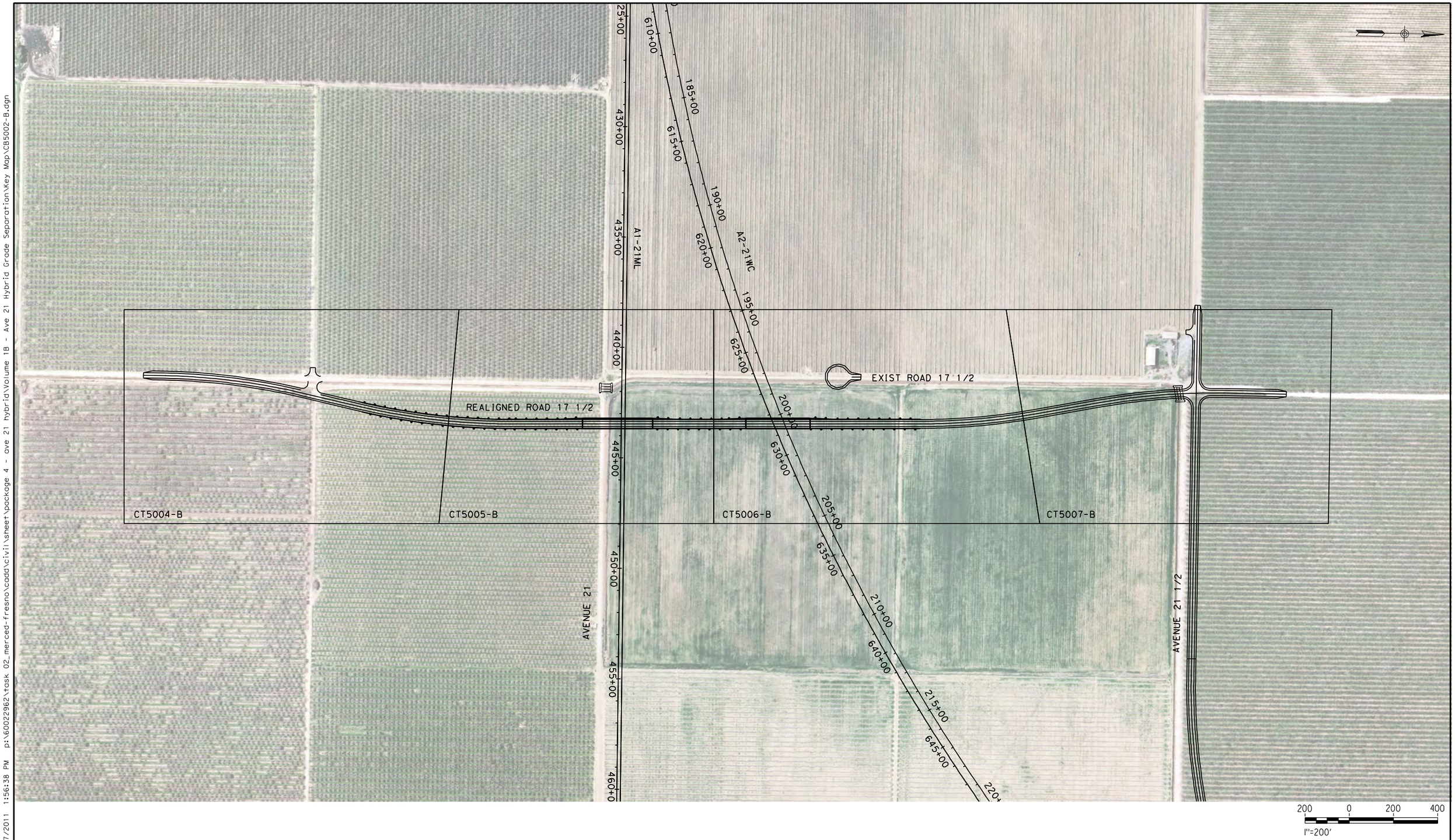

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 17 1/2
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB5002-B
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UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 22
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
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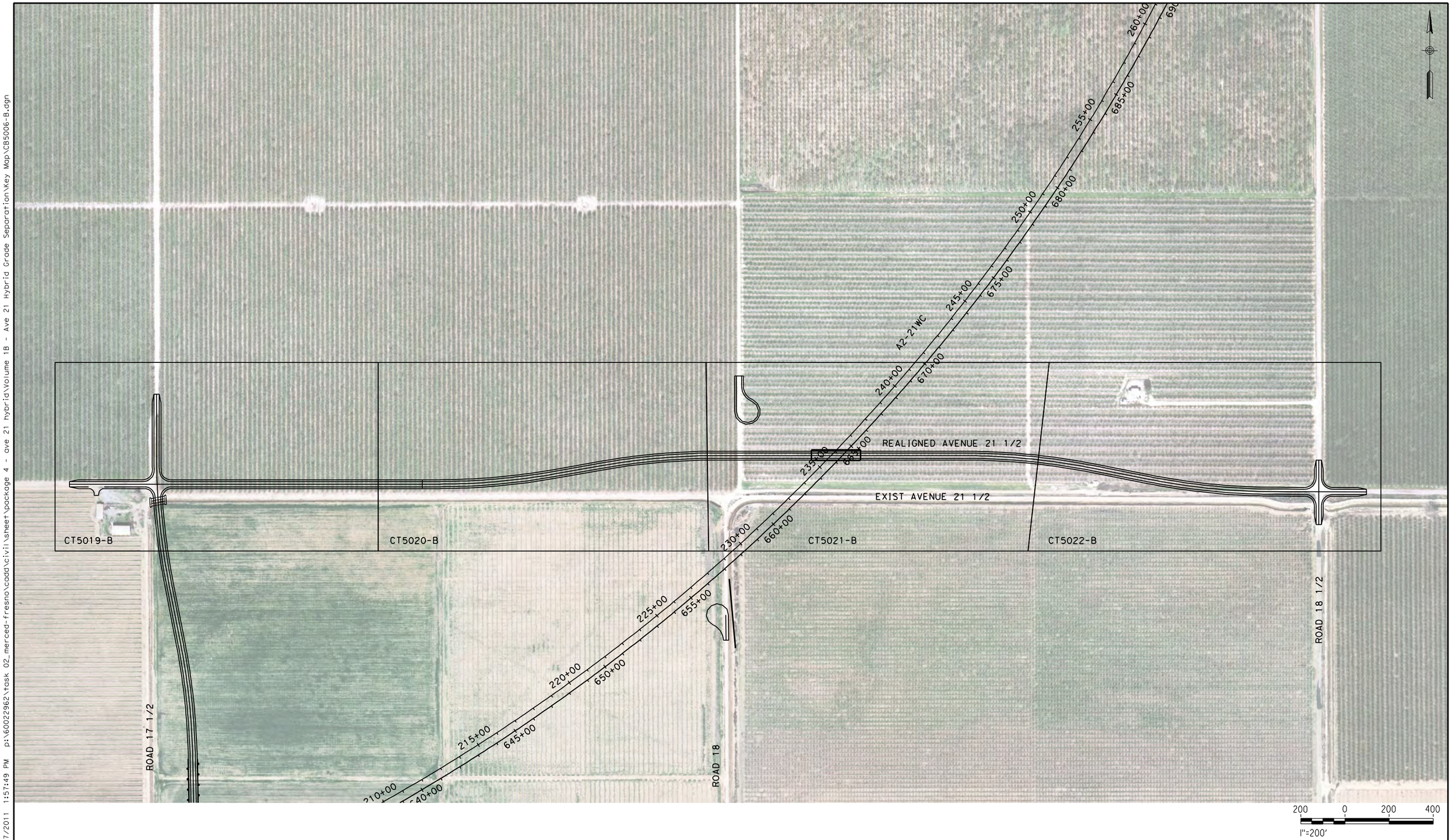

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CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 21 1/2
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB5006-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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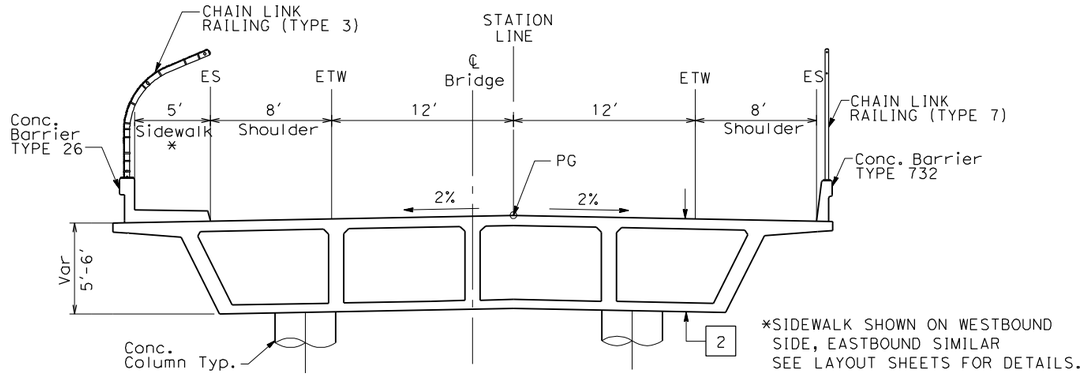
NOTES:

1. DIMENSIONS OF EXISTING PAVEMENT WIDTHS ARE BASED ON MEASUREMENTS MADE IN THE FIELD AND ARE APPROXIMATE.
2. PAVEMENT SECTIONS ARE TO BE DETERMINED. GEOTECHNICAL INVESTIGATIONS WILL BE CONDUCTED IN A SUBSEQUENT PHASE TO DETERMINE STRUCTURAL SECTIONS FOR EACH CROSSING.
3. SPACING OF BENCHES ON PROPOSED FILL SECTIONS ARE TO BE DETERMINED.
4. RIGHT-OF-WAY (R/W) WIDTH IS FOR INFORMATION ONLY. EXACT WIDTH TO BE DETERMINED IN COORDINATION WITH AFFECTED AGENCY.



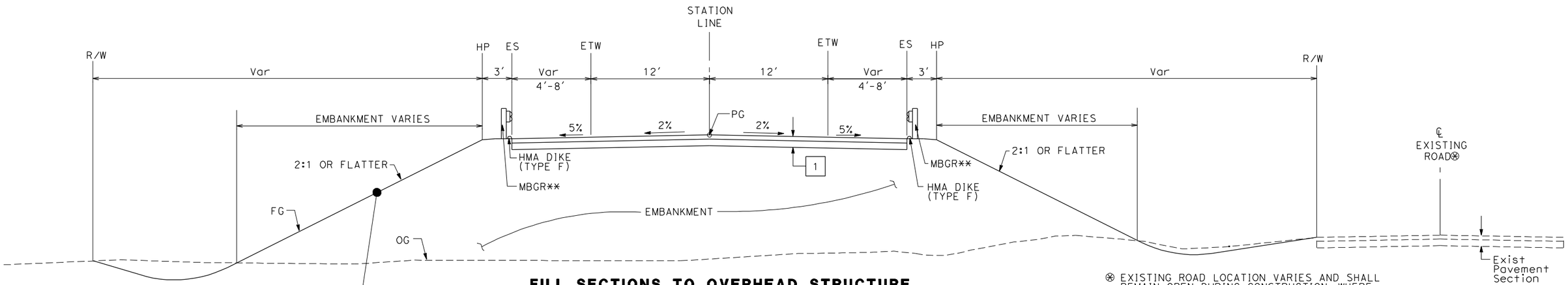
OVERHEAD STRUCTURE

SEE STRUCTURAL PLANS

STRUCTURAL SECTIONS:

1 — HMA TYPE A
AB CLASS 2

2 — CAST IN PLACE / PRESTRESSED BOX GIRDER (6' STRUCTURE DEPTH)

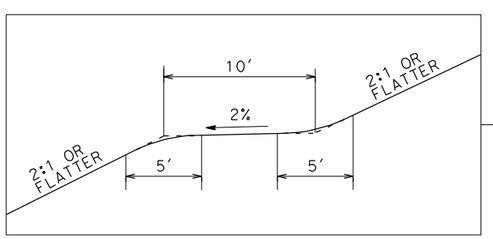


FILL SECTIONS TO OVERHEAD STRUCTURE

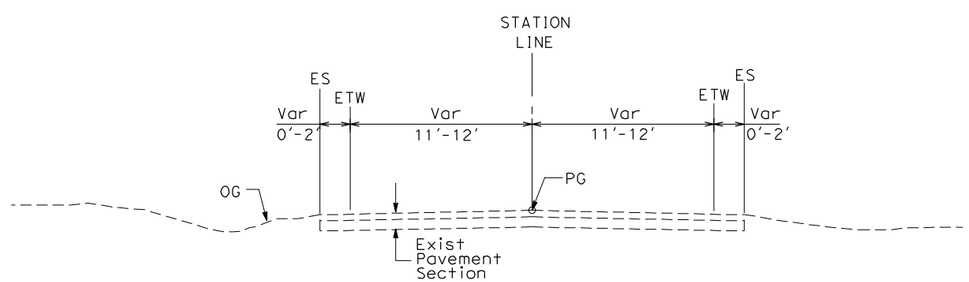
WEST SIDE SHOWN (EAST SIDE SIMILAR)

⊗ EXISTING ROAD LOCATION VARIES AND SHALL REMAIN OPEN DURING CONSTRUCTION. WHERE SHOWN ON THE PLAN CLOSE AND OBLITERATE EXISTING ROADWAY SUBSEQUENT TO CONSTRUCTION OF THE REALIGNED ROADWAY.

** EXACT LIMITS OF MBGR PER AGENCY REQUIREMENTS.



BENCHING DETAIL



EXISTING LOCAL ROAD

WEST SIDE SHOWN (EAST SIDE SIMILAR)

SEE LAYOUT SHEETS FOR ACTUAL ROADWAY WIDTHS AT EACH CROSSING

TYPICAL CROSS SECTIONS ON THIS SHEET APPLY TO THE FOLLOWING ROADWAYS FOR AVE 21 HYBRID:

NO.	STREET NAME	NO.	STREET NAME
1	ROAD 16		
2	ROAD 17-1/2	13	AVENUE 17
3	AVENUE 22	14	AVENUE 20
4	AVENUE 21 1/2	15	AVENUE 20 1/2
5	AVENUE 9	16	ROAD 18 1/2
6	AVENUE 10	17	AVENUE 7
7	AVENUE 11	18	G ST
8	AVENUE 12	19	ROAD 20
9	AVENUE 13	20	ROAD 26
10	AVENUE 15	21	ROAD 22
11	AVENUE 15 1/2		

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/12/2011	RG			

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DATE 06/30/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID
GRADE SEPARATIONS
TYPICAL CROSS SECTIONS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CT4990-B
SCALE NTS
SHEET NO. ### OF ###

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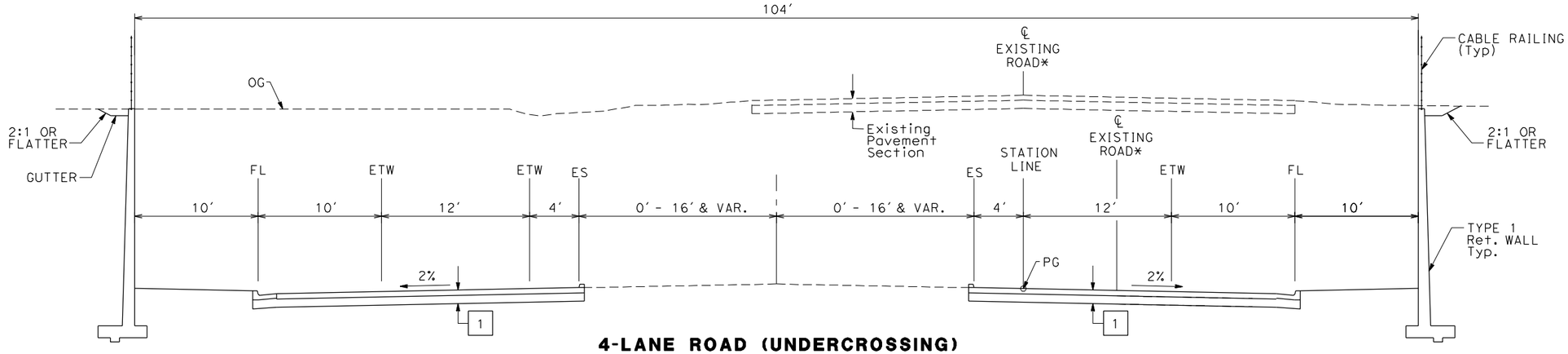
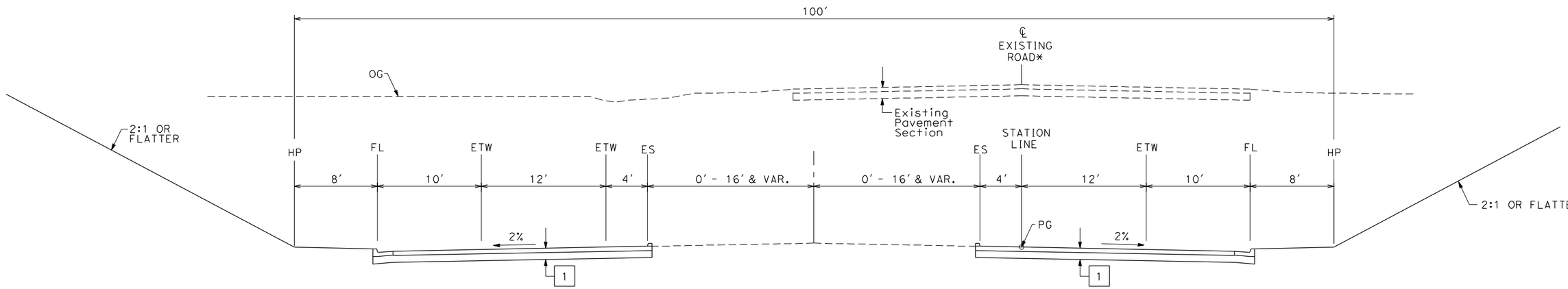


4-LANE ROAD (UNDERCROSSING)

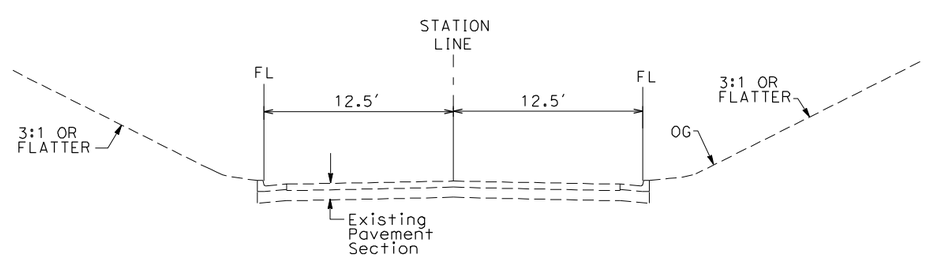
SEE STRUCTURAL PLANS



4-LANE ROAD*

WEST SIDE SHOWN (EAST SIDE SIMILAR)

* EXISTING ROAD LOCATION VARIES. CONSTRUCTION SHALL BE STAGED TO KEEP ROAD OPEN DURING CONSTRUCTION.



EXISTING 2-LANE ROAD

EAST SIDE SHOWN (WEST SIDE SIMILAR)

TYPICAL CROSS SECTIONS ON THIS SHEET APPLY TO THE FOLLOWING ROADWAYS FOR ALIGNMENT AVE 21 HYBRID:

NO.	STREET NAME
1	ROAD 26
2	ROAD 22

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY FD
CHECKED BY JZ
IN CHARGE AB
DATE 06/30/2011

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MERCED TO FRESNO

AVE 21 HYBRID
GRADE SEPARATIONS
TYPICAL CROSS SECTIONS
SHEET 2 OF 2

CONTRACT NO. HSR06-007
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SCALE NTS
SHEET NO. ### OF ###

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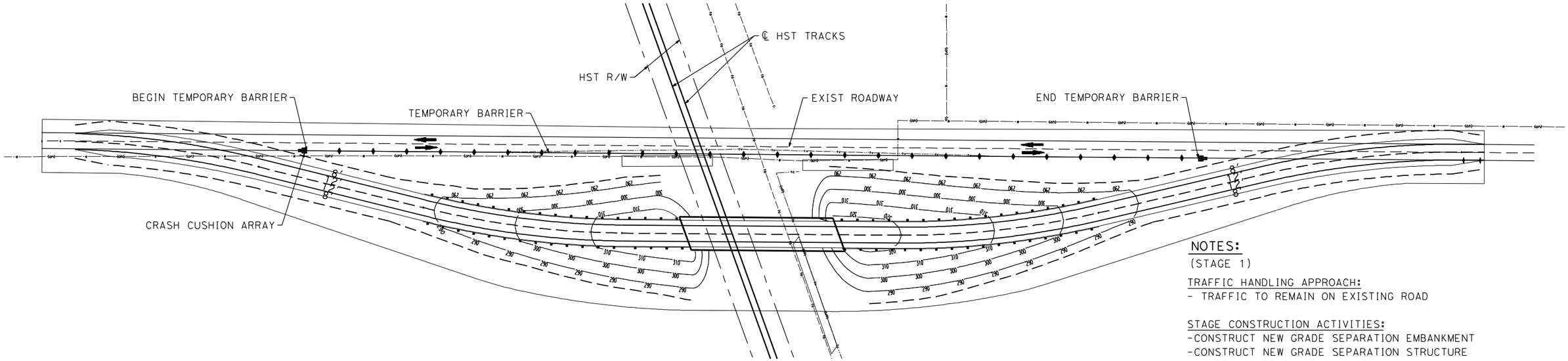
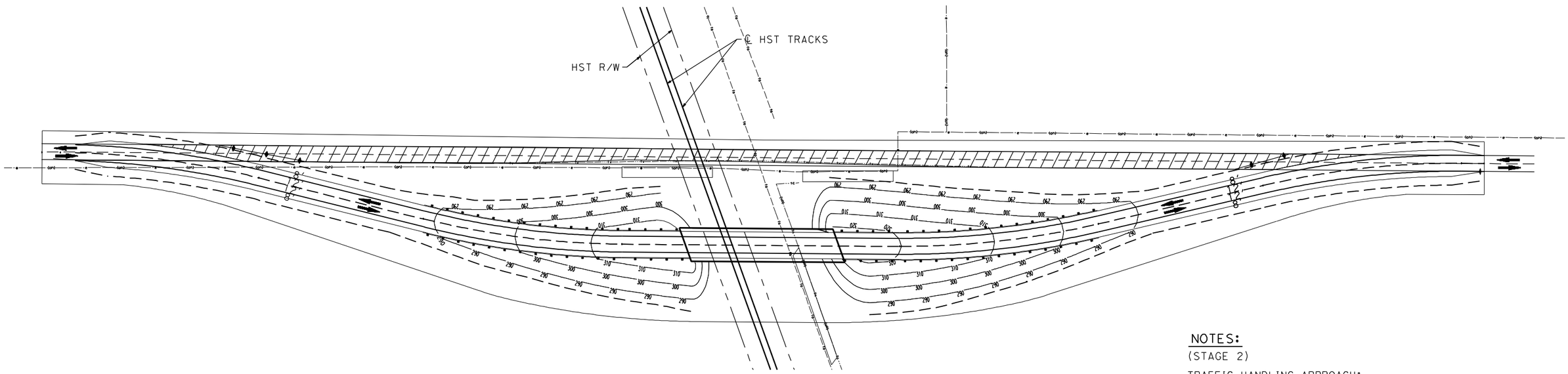


STAGE CONSTRUCTION (STAGE 1)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- TRAFFIC TO REMAIN ON EXISTING ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT NEW GRADE SEPARATION EMBANKMENT
-CONSTRUCT NEW GRADE SEPARATION STRUCTURE
-CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 2)

NOTES:
(STAGE 2)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT REALIGNED ROAD CONFORMS
-COMPLETE DRAINAGE FACILITIES
-REMOVE BASE AND SURFACING OF EXIST ROAD

LEGEND:

- CRASH CUSHION ARRAY (ARRAY TS 11)
- TEMPORARY BARRIER (TYPE K)
- DIRECTION OF TRAVEL
- REMOVE BASE AND SURFACING (EXIST ROAD)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY SW
DRAWN BY SW/FD
CHECKED BY JZ
IN CHARGE AB
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID

GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CT4992-B
SCALE NO SCALE
SHEET NO. ### OF ###

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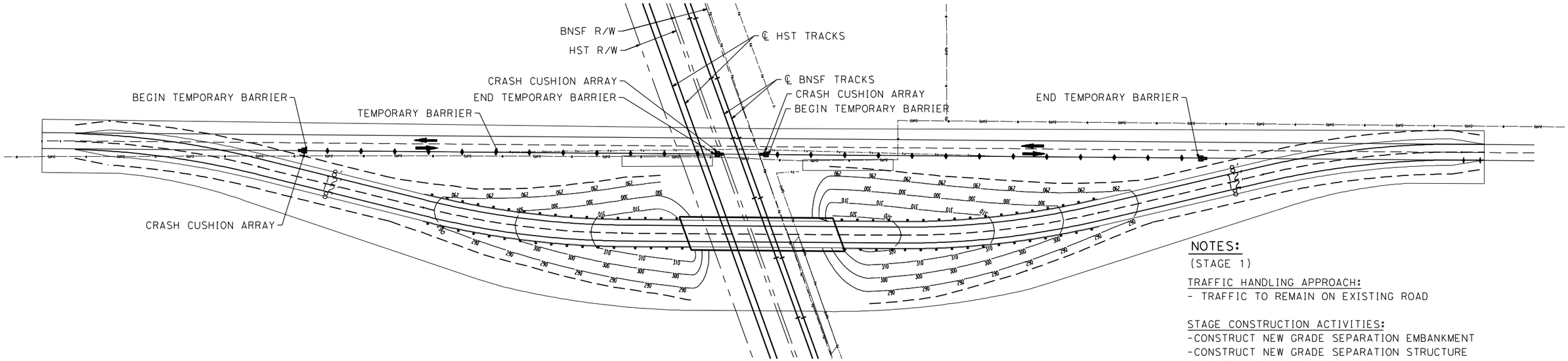
ayeled

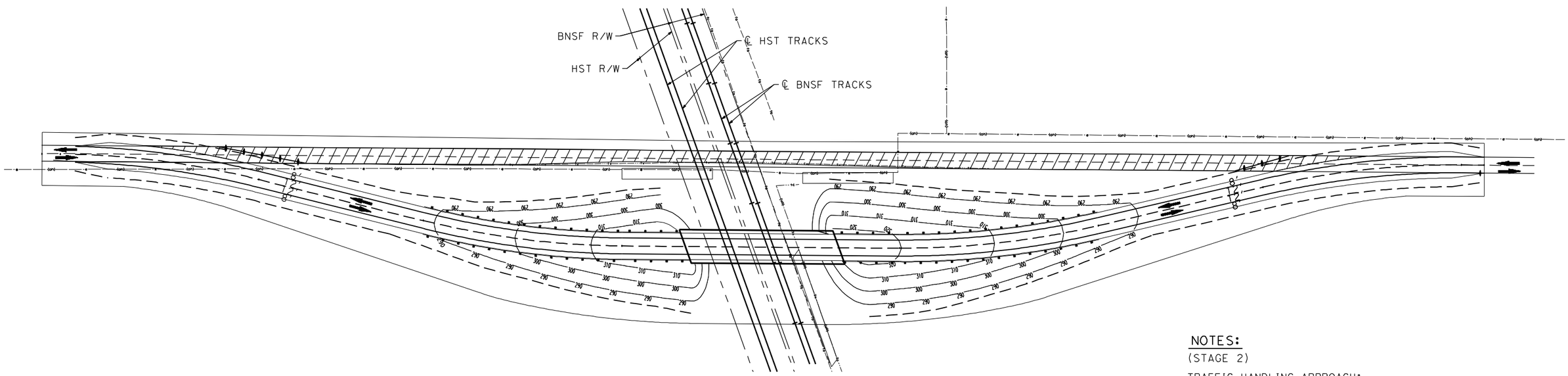


STAGE CONSTRUCTION (STAGE 1)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- TRAFFIC TO REMAIN ON EXISTING ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT NEW GRADE SEPARATION EMBANKMENT
-CONSTRUCT NEW GRADE SEPARATION STRUCTURE
-CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 2)

NOTES:
(STAGE 2)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT REALIGNED ROAD CONFORMS
-COMPLETE DRAINAGE FACILITIES
-REMOVE SURFACE AND BASE OF EXIST ROAD

LEGEND:

- CRASH CUSHION ARRAY (ARRAY TS11)
- TEMPORARY BARRIER (TYPE K)
- DIRECTION OF TRAVEL
- REMOVE BASE AND SURFACING (EXIST ROAD)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY SW
DRAWN BY SW/FD
CHECKED BY JZ
IN CHARGE AB
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID

GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CT4993-B
SCALE NO SCALE
SHEET NO. ### OF ###

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ayeled

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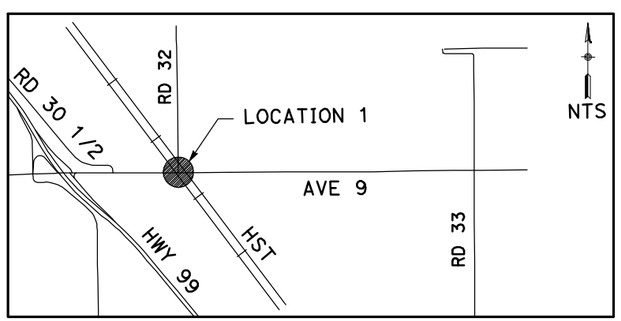

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1000-A THROUGH CT1002-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 9
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0001-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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CURVE DATA

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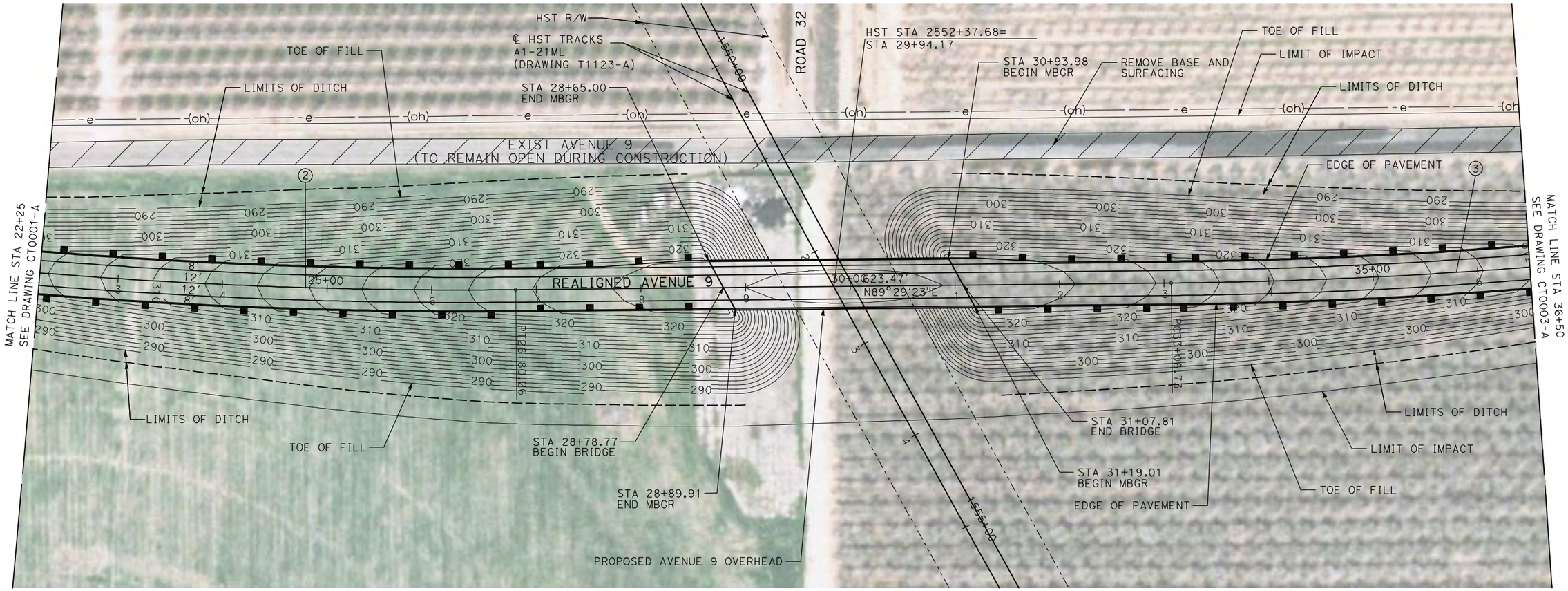

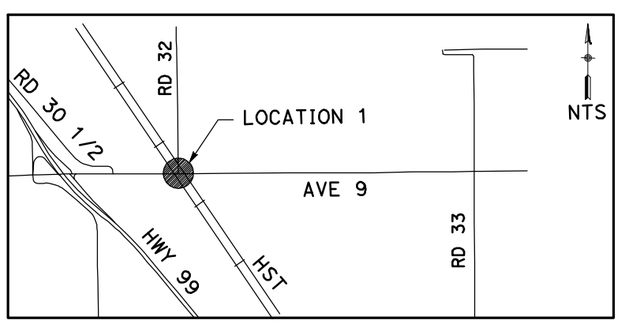

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1000-A THROUGH CT1002-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 9
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0002-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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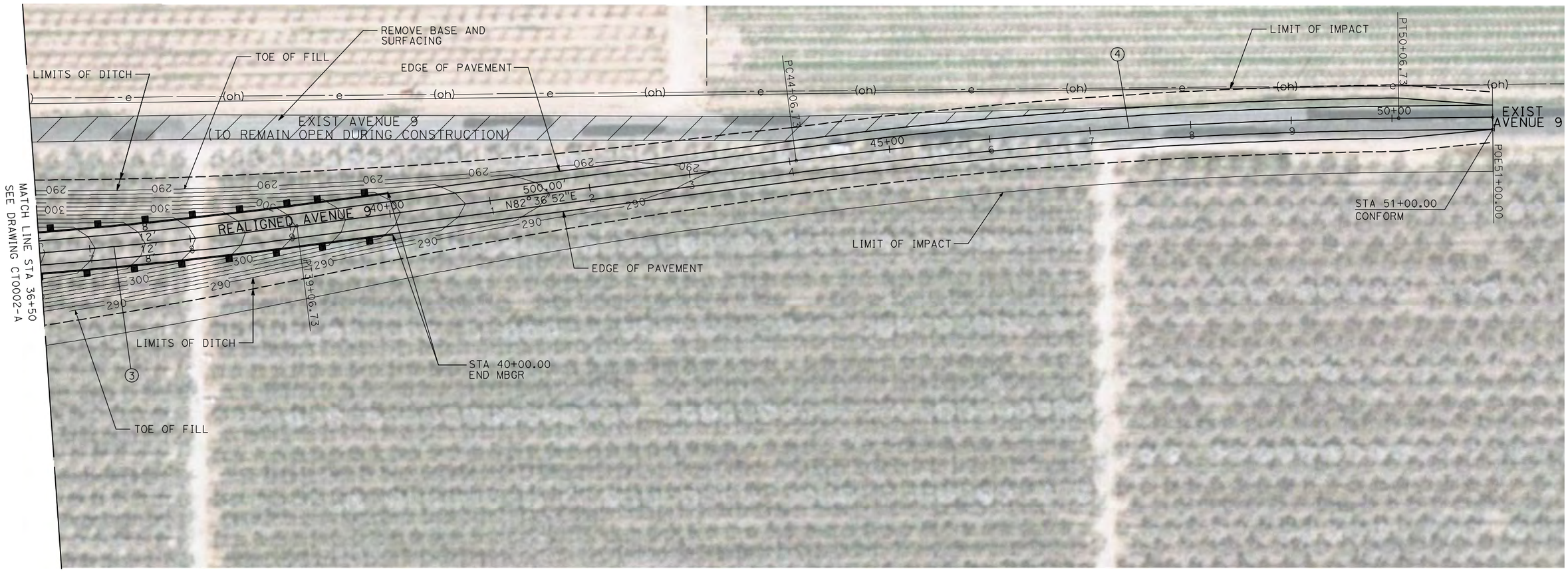

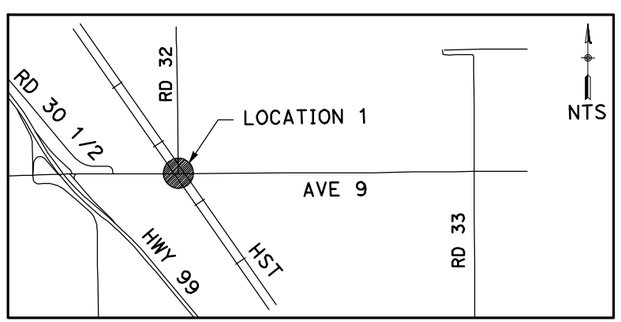

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1000-A THROUGH CT1002-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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2020 L Street, Suite 300
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 9
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0003-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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CURVE DATA

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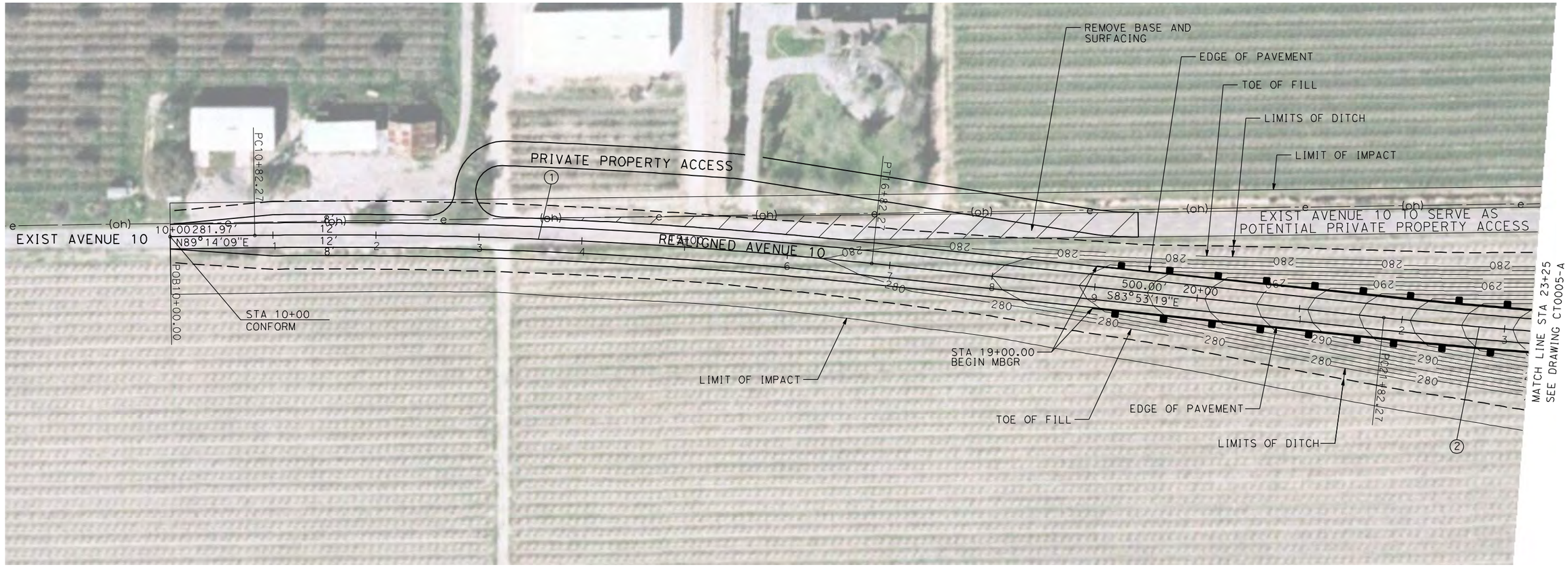

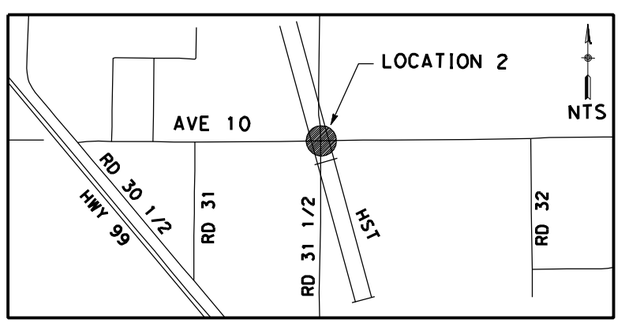

NOTE:

1. FOR PROFILES, SEE DRAWINGS CT1003-A THROUGH CT1005-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
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Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 10
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0004-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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CURVE DATA

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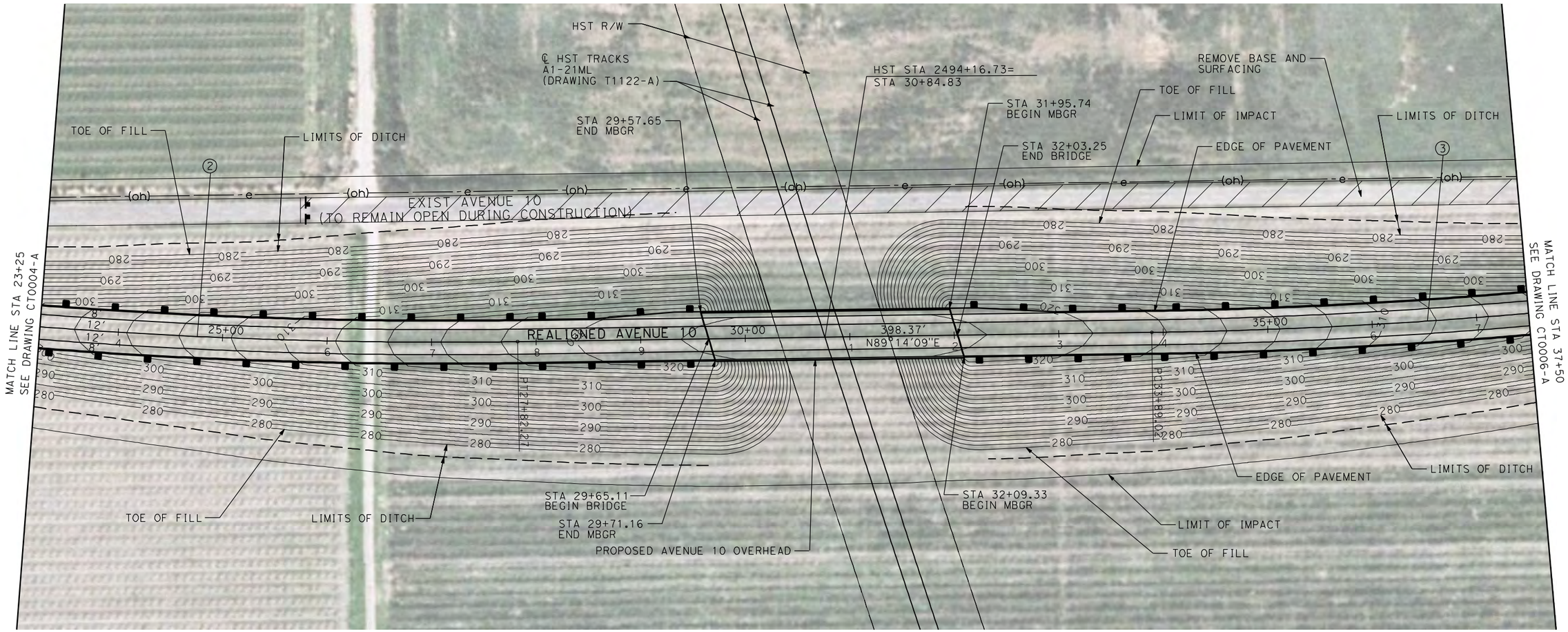

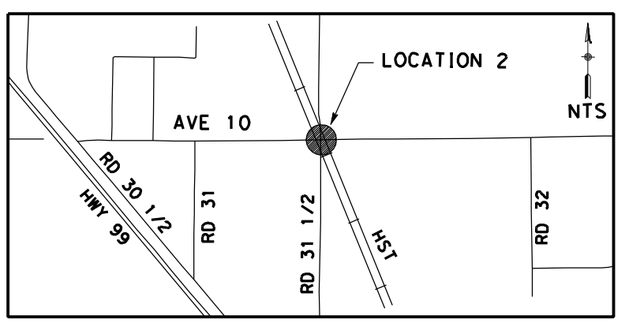

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1003-A THROUGH CT1005-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 10
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0005-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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GibsonR1

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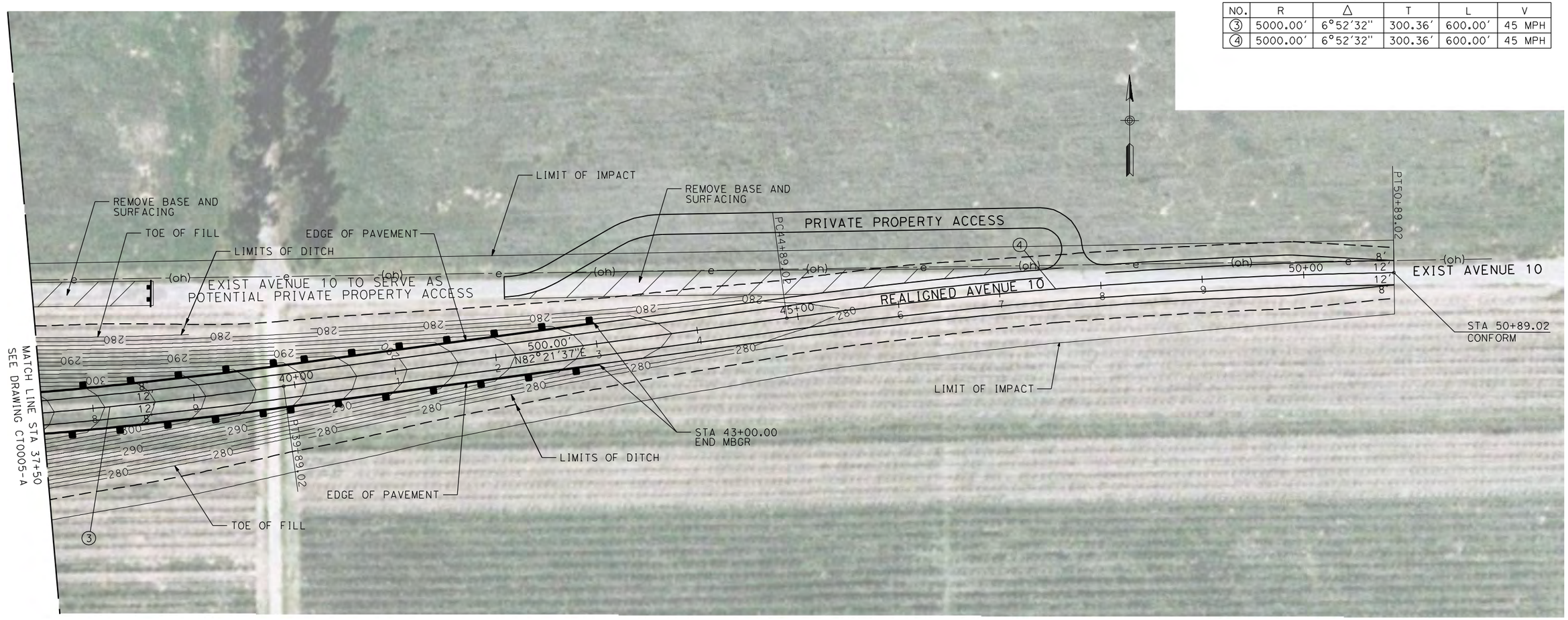
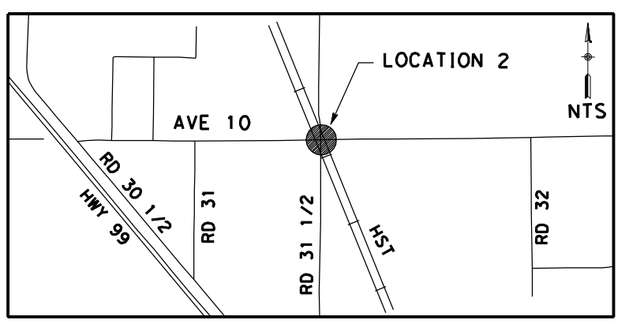


NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1003-A THROUGH CT1005-A.



50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 10
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0006-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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GibsonR1

CURVE DATA

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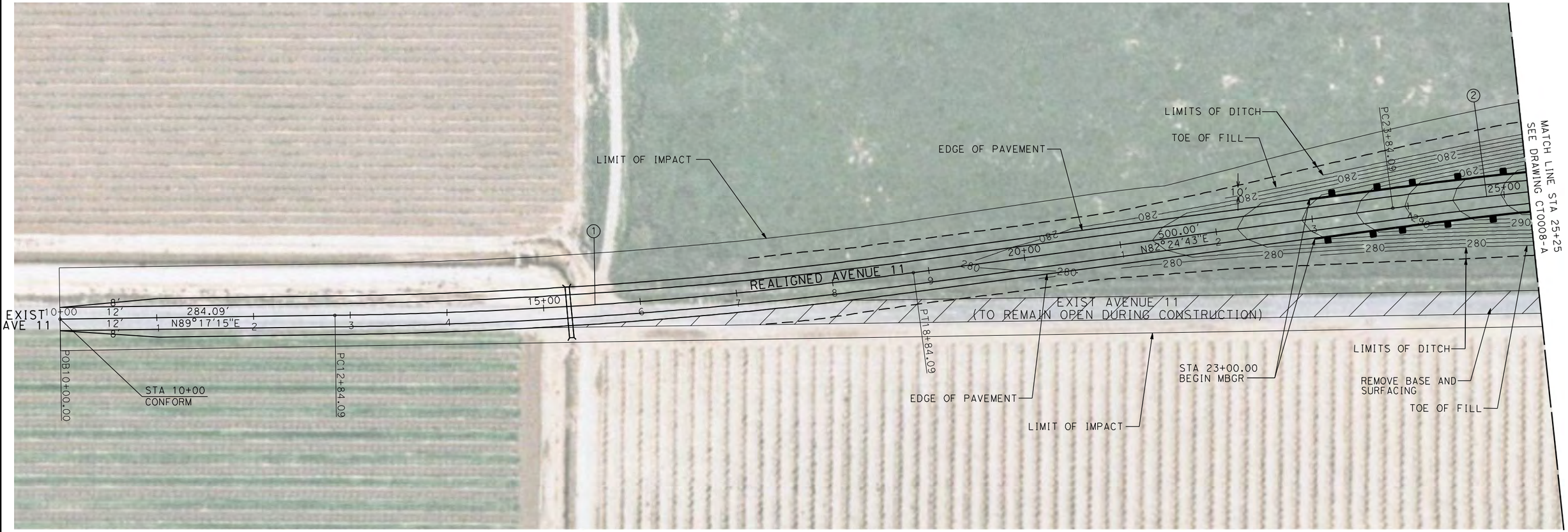

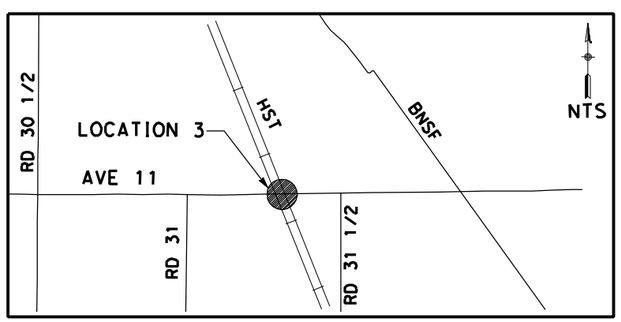

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1006-A THROUGH CT1008-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 11
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0007-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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CURVE DATA

NO.	R	Δ	T	L	V
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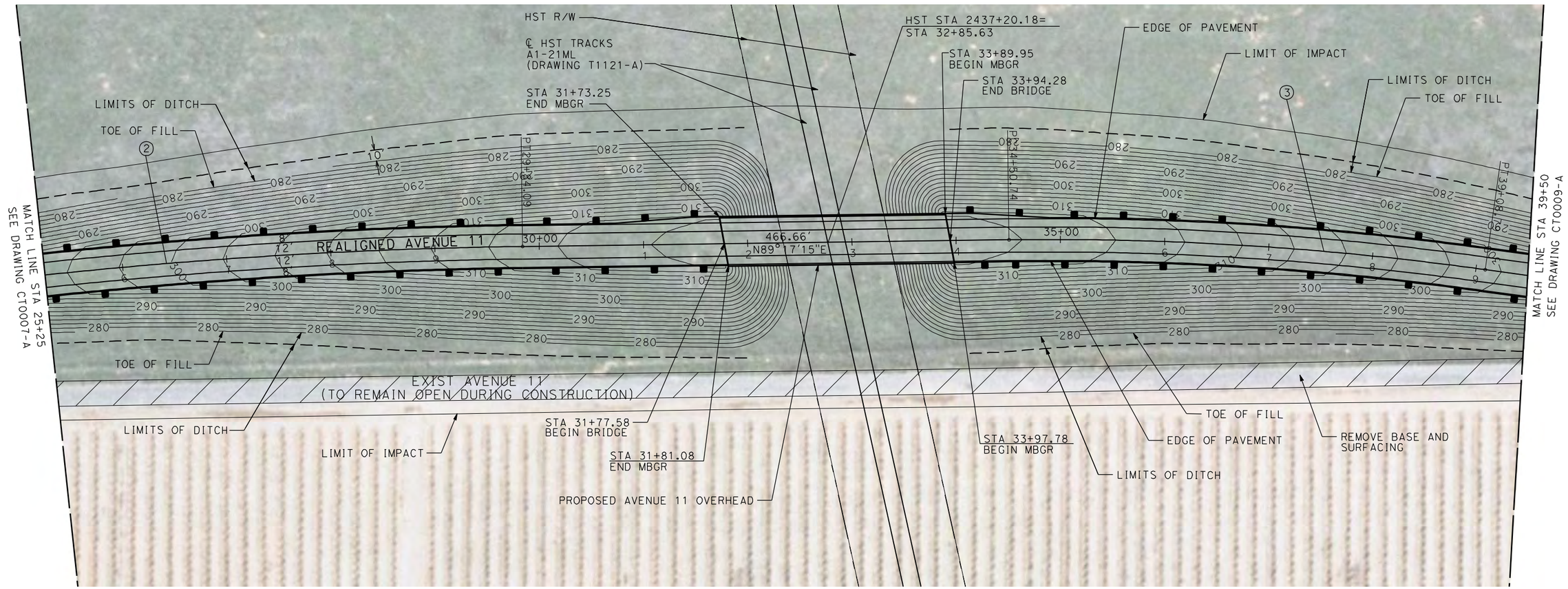

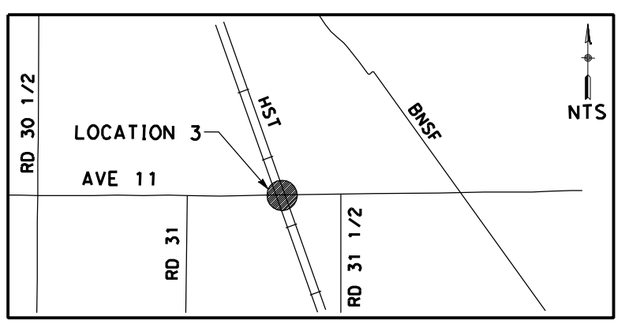

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1006-A THROUGH CT1008-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 11
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0008-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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GibsonR1

CURVE DATA

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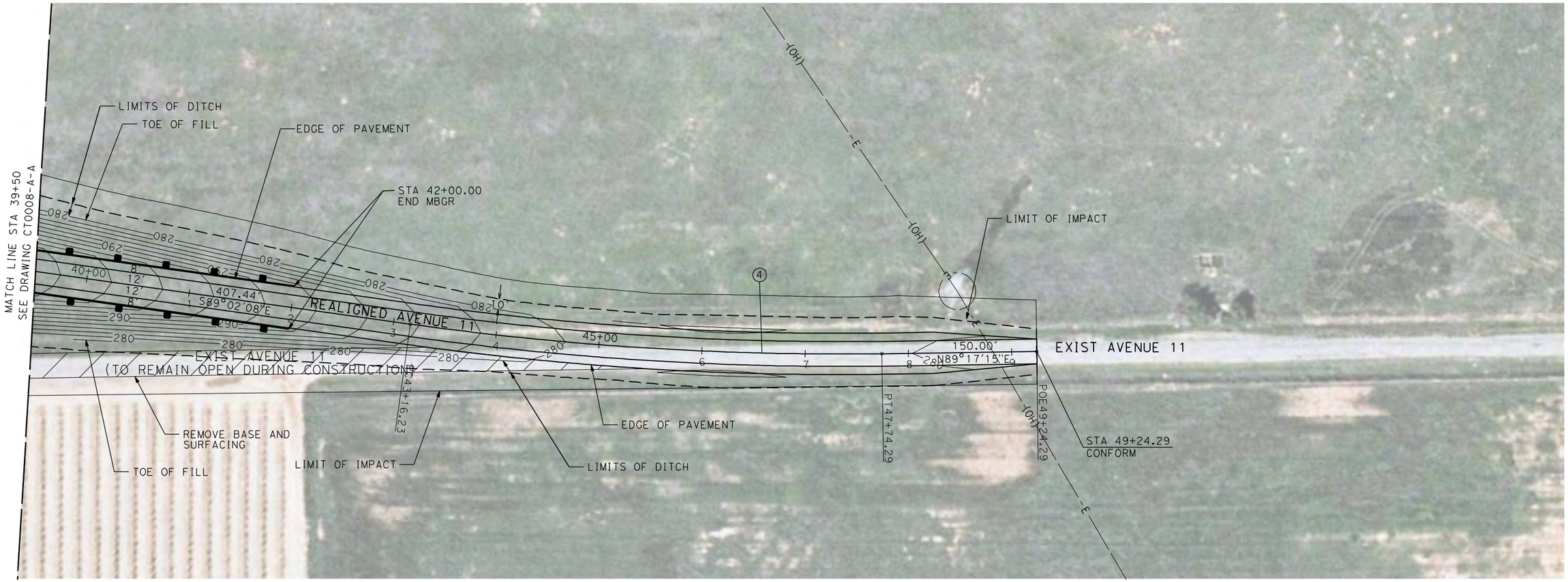

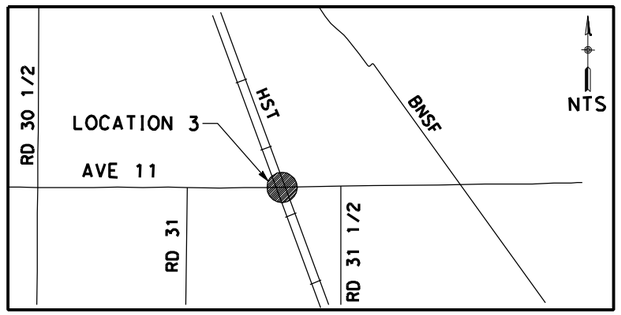

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1006-A THROUGH CT1008-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 11
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0009-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
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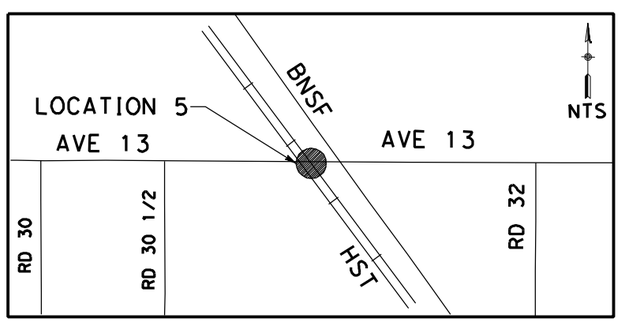

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1012-A THROUGH CT1014-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 13
LAYOUT
SHEET 1 OF 4

CONTRACT NO. HST06-007
DRAWING NO. CT0013-A
SCALE AS SHOWN
SHEET NO. ### OF ###

GibsonR1 1/11/2012 4:18:38 PM I:\cnsr\60022962\task-03_merced-fresno\cadd\civil\design\gibsonr\rev 1 - 15% plans\cadd\sheet\plans\a1\MF-CT-0013-A_REV1.dgn

CURVE DATA

NO.	R	Δ	T	L	V
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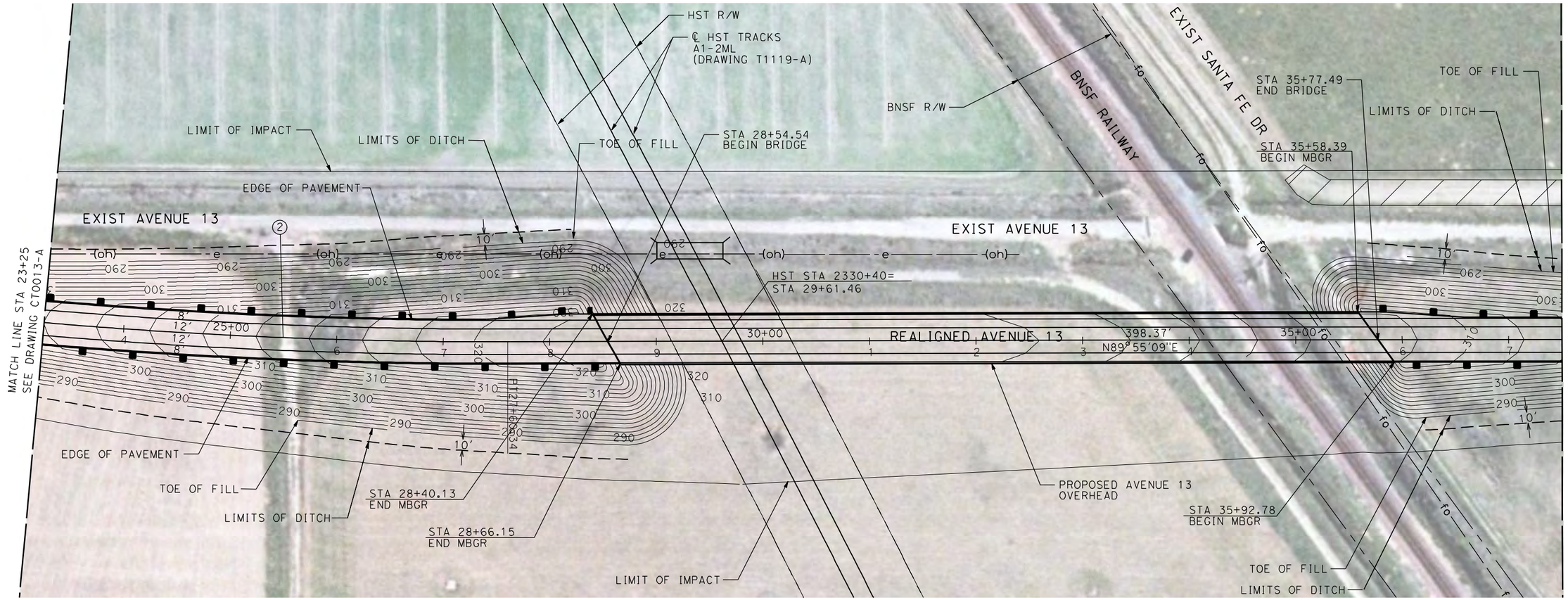

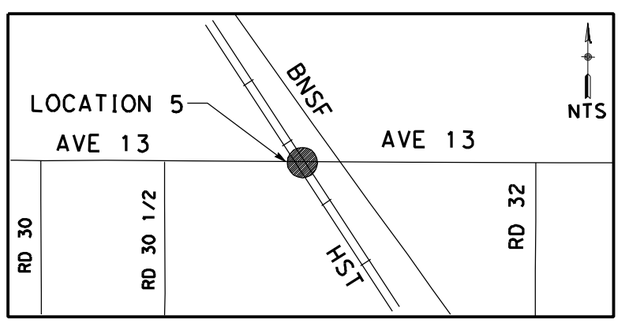

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1012-A THROUGH CT1014-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 13
LAYOUT
SHEET 2 OF 4

CONTRACT NO. HST06-007
DRAWING NO. CT0014-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
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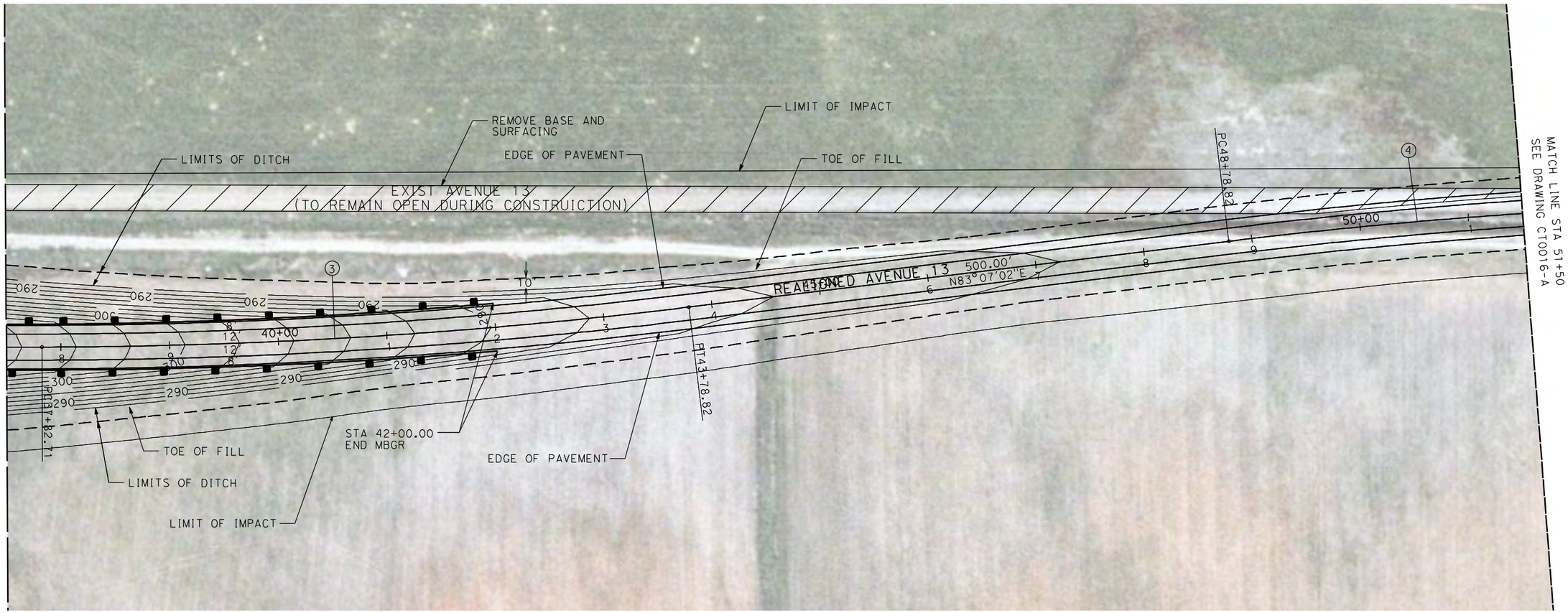
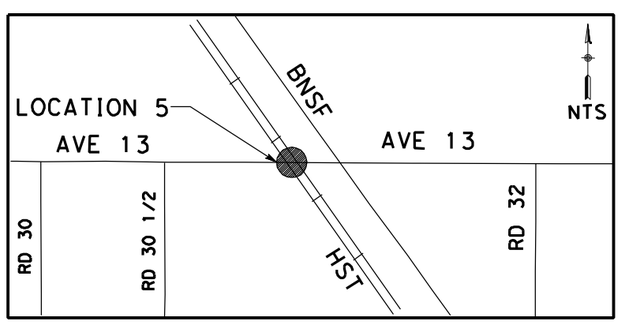
4	5000.00'	6°52'32"	300.36'	600.00'	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1012-A THROUGH CT1014-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 13
LAYOUT
SHEET 3 OF 4

CONTRACT NO. HST06-007
DRAWING NO. CT0015-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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CURVE DATA

NO.	R	Δ	T	L	V
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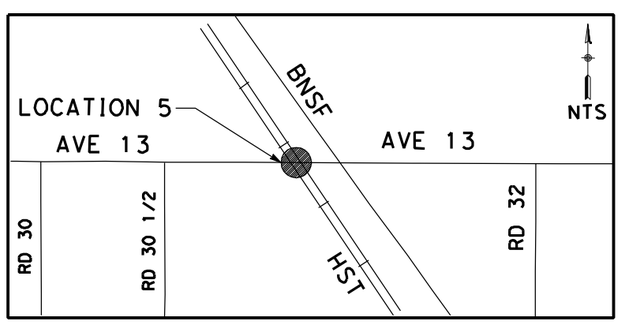

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1012-A THROUGH CT1014-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
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CONSTRUCTION

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 13
LAYOUT
SHEET 4 OF 4

CONTRACT NO. HST06-007
DRAWING NO. CT0016-A
SCALE AS SHOWN
SHEET NO. ### OF ###

GibsonR1 1/11/2012 4:18:11 PM i:\chsr\60022962\task-03_merced-fresno\cadd\civil\design\gibsonr\rev 1 - 15% plans\cadd\sheet\plans\a1\MF-CT-0016-A_REV1.dgn

CURVE DATA

NO.	R	Δ	T	L	V
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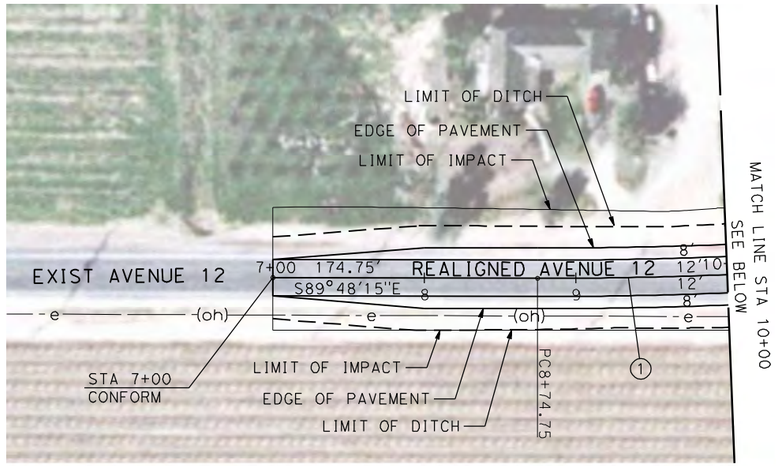

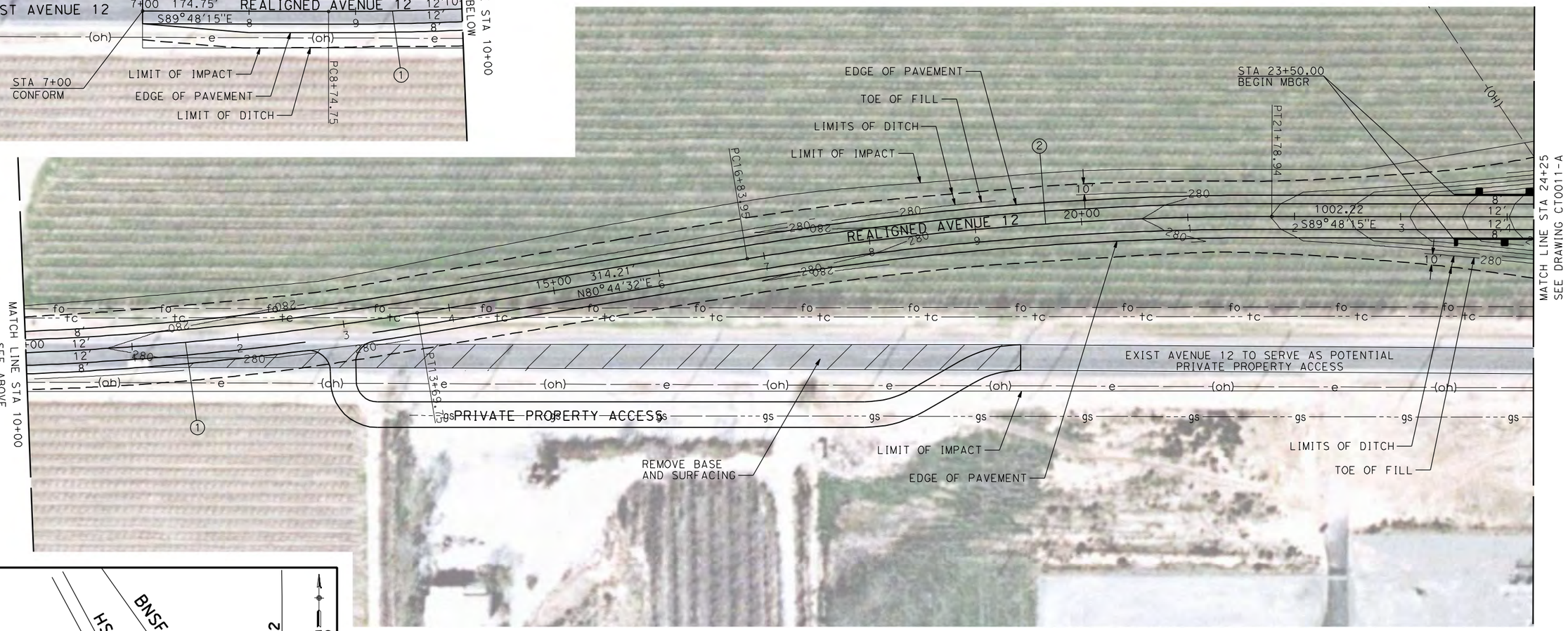

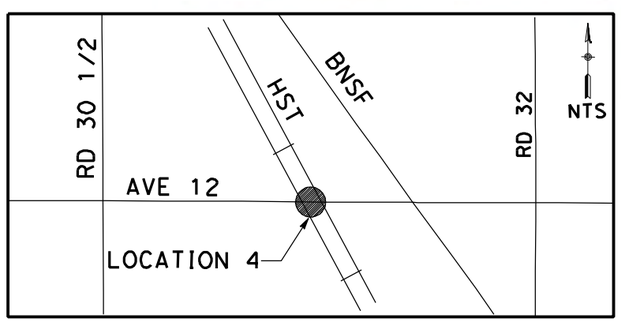

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1009-A THROUGH CT1011-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 12
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0010-A
SCALE AS SHOWN
SHEET NO. ### OF ###

GibsonR1 1/11/2012 4:19:09 PM i:\chsr\6002962\task-03_merced-fresno\cadd\civil\design\gibsonr\rev 1 - 15% plans\cadd\sheet\plans\a1\MF-CT-0010-A_REV1.dgn

CURVE DATA

NO.	R	Δ	T	L	V
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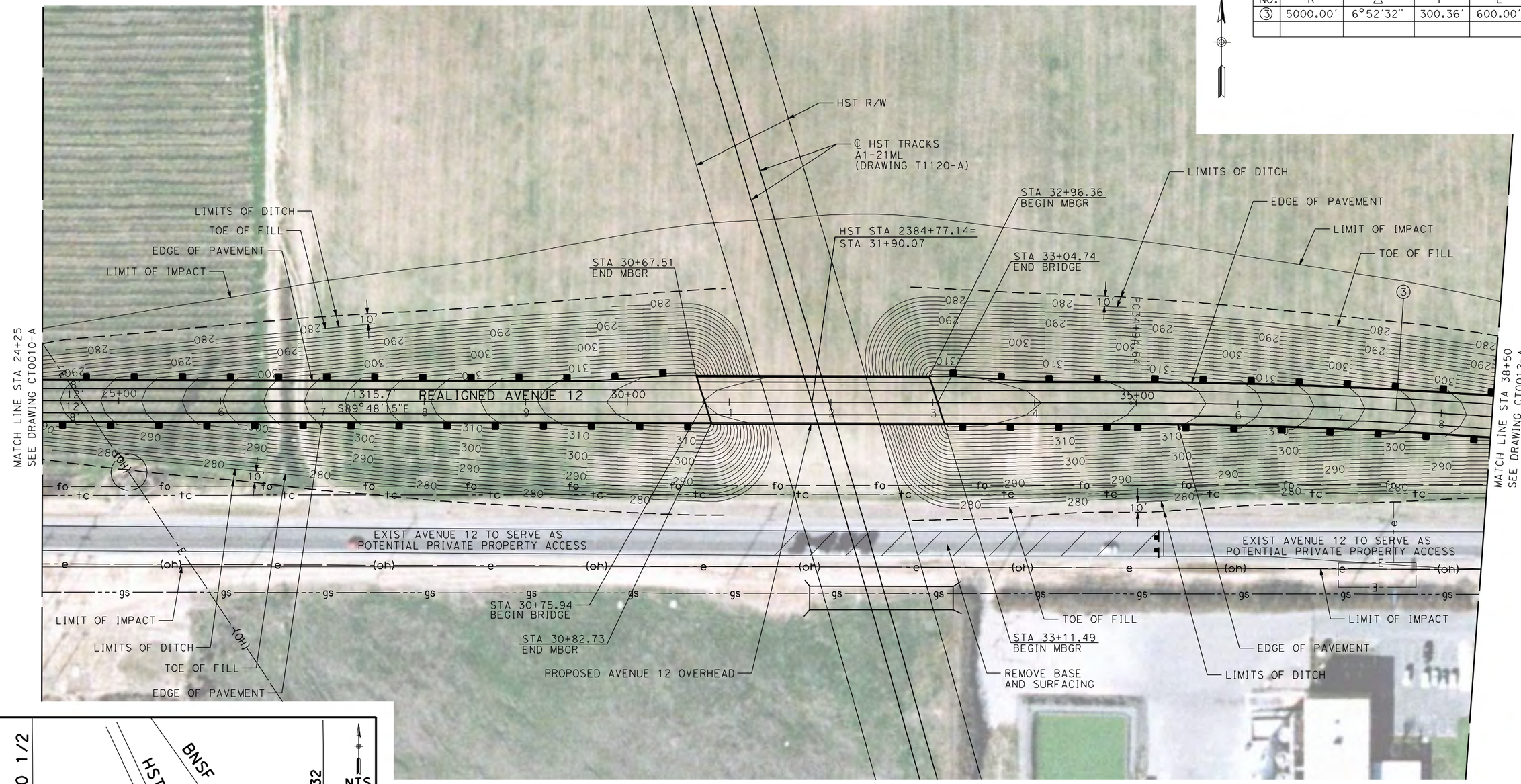

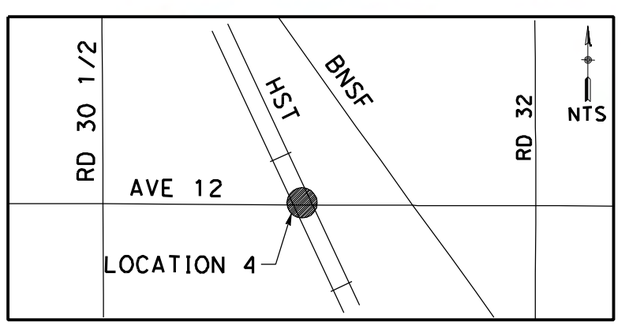

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1009-A THROUGH CT1011-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 12
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0011-A
SCALE AS SHOWN
SHEET NO. ### OF ###

GibsonR1 1/11/2012 4:18:58 PM i:\chsr\6002962\task-03_merced-fresno\cadd\civil\design\gibsonr\rev 1 - 15% plans\cadd\sheet\plans\a1\MF-CT-0011-A_REV1.dgn

gibsonr1 4/6/2012 1:54:55 PM I:\CHSR\60022962\Task-03_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\ELECTONIC SUBMITTAL 3-1-2012\ROADWAY OPT 1\SHEET\Hybrid\Vol

CURVE DATA

NO.	R	Δ	T	L	V
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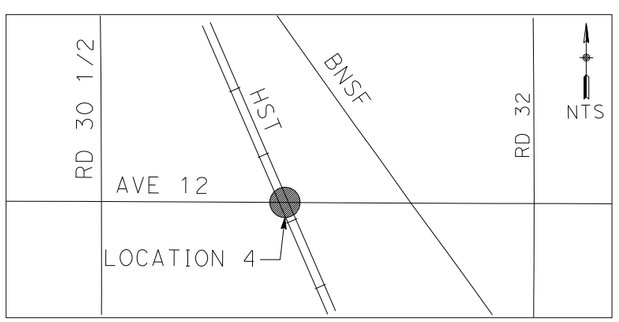
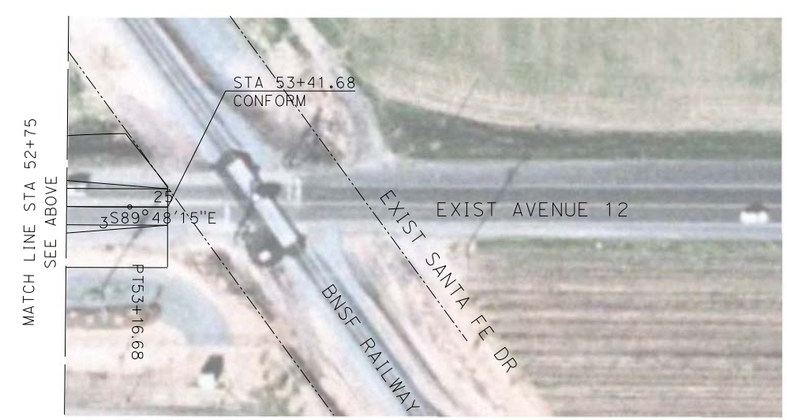
4	5000.00'	6°52'32"	300.36'	600.00'	45 MPH



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1009-A THROUGH CT1011-A.



50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

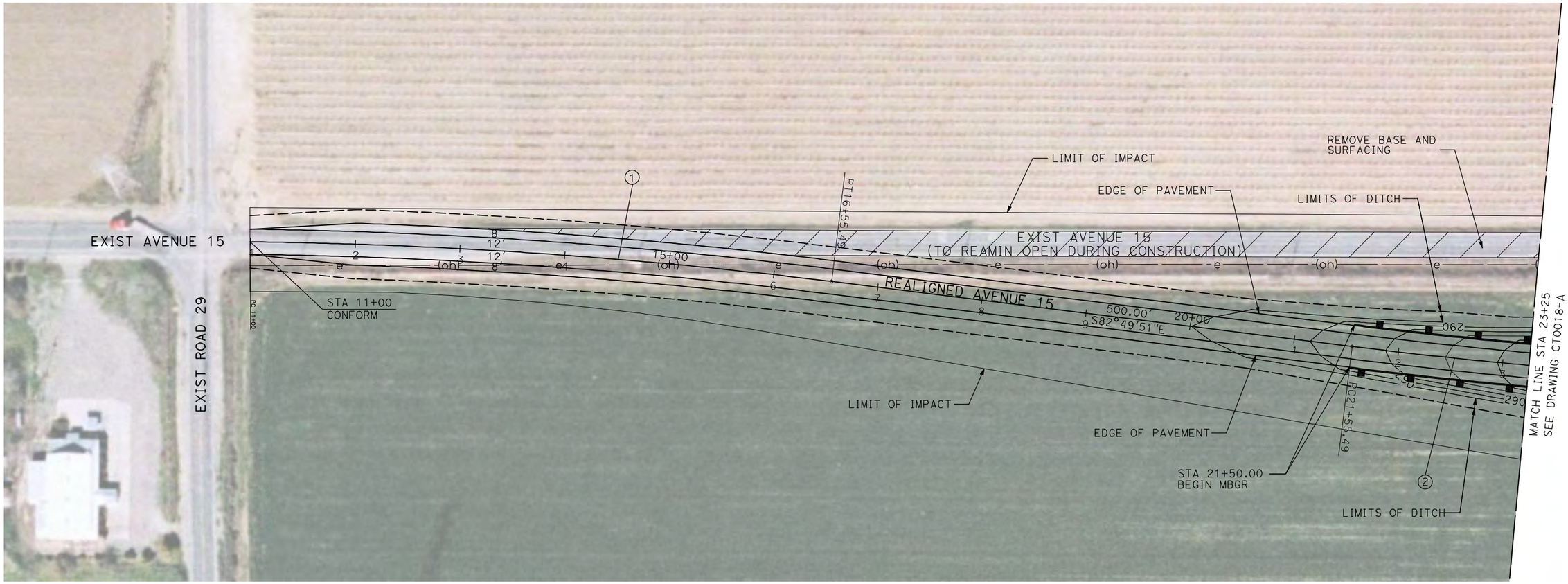
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

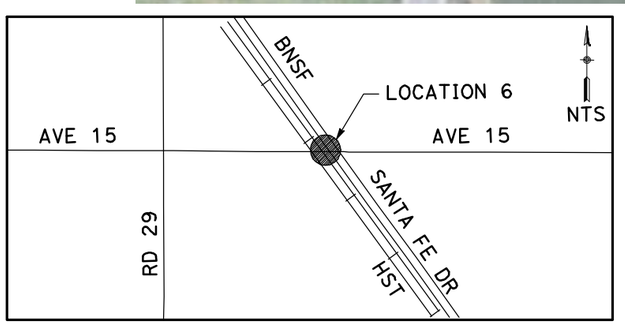
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 12
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0012-A
SCALE AS SHOWN
SHEET NO. OF ###

CURVE DATA

NO.	R	Δ	T	L	V
1	5000.00′	6°52′32″	300.36′	600.00′	45 MPH
2	5000.00′	6°52′32″	300.36′	600.00′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1015-A THROUGH CT1017-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

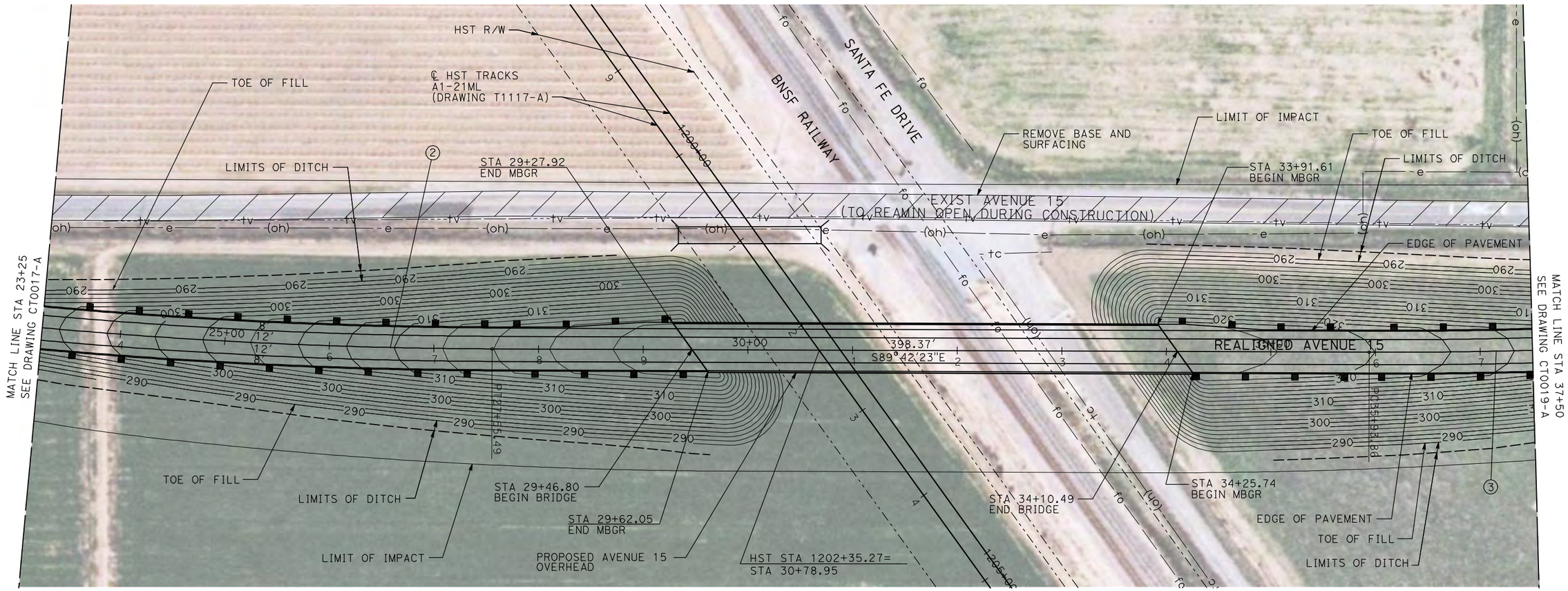
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 15
LAYOUT
SHEET 1 OF 3

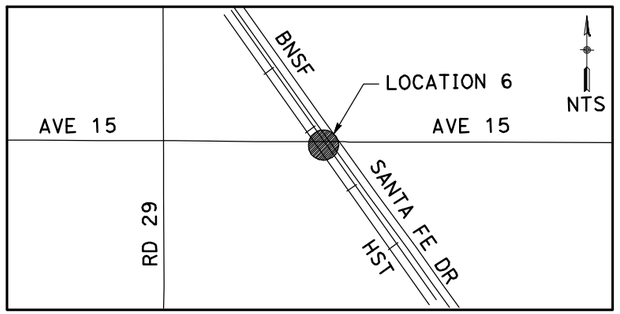
CONTRACT NO. HST06-007
DRAWING NO. CT0017-A
SCALE AS SHOWN
SHEET NO. ### OF ###

6/28/2011 4:27:47 PM I:\chsr\60022962\task-02_merced-fresno\cadd\civil\Sheet\ROADWAY\Hybrid-Ave21\Volume 1 - Ave21Hybrid Grade Separation\Layout\Common with Ave 21\MF-CT-0017-A.dgn
GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
2	5000.00′	6°52′32"	300.36′	600.00′	45 MPH
3	5000.00′	6°52′32"	300.36′	600.00′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1015-A THROUGH CT1017-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

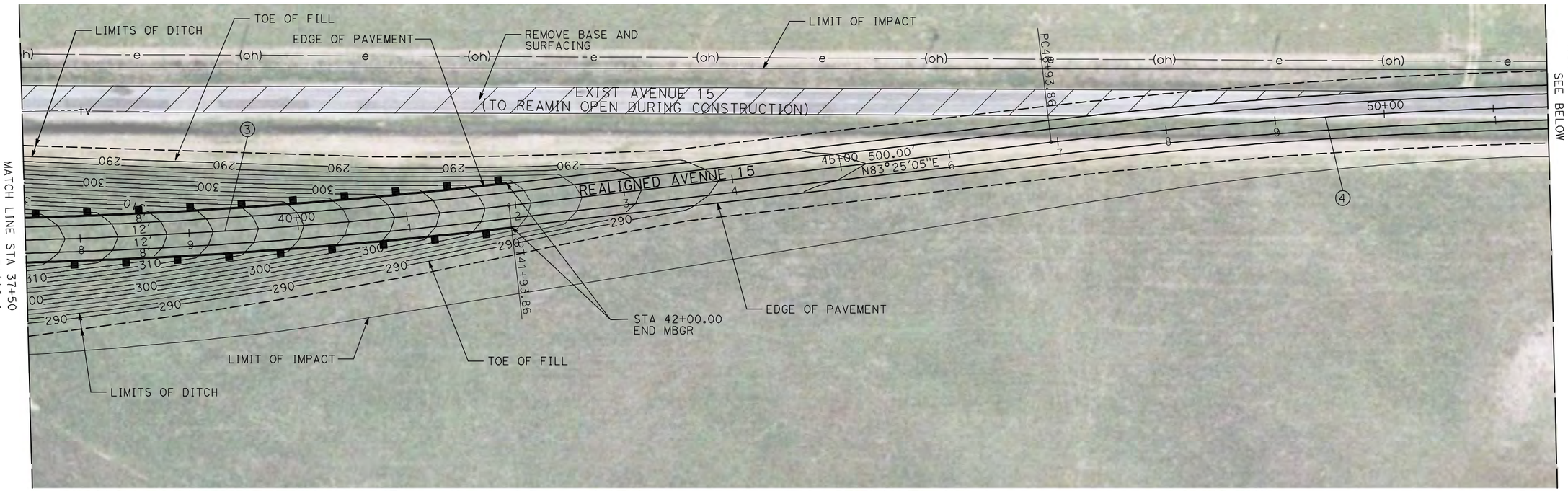
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 15
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0018-A
SCALE AS SHOWN
SHEET NO. OF ###

GibsonR1 6/28/2011 4:27:54 PM I:\cnsr\60022962\task-02_merced-fresno\cadd\civil\Sheet\ROADWAY\Hybrid-Ave21\Volume 1 - Ave21Hybrid Grade Separation\Layout\Common with Ave 21\MF-CT-0018-A.dgn

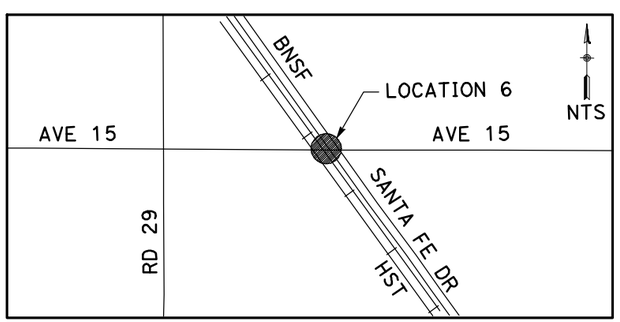
CURVE DATA

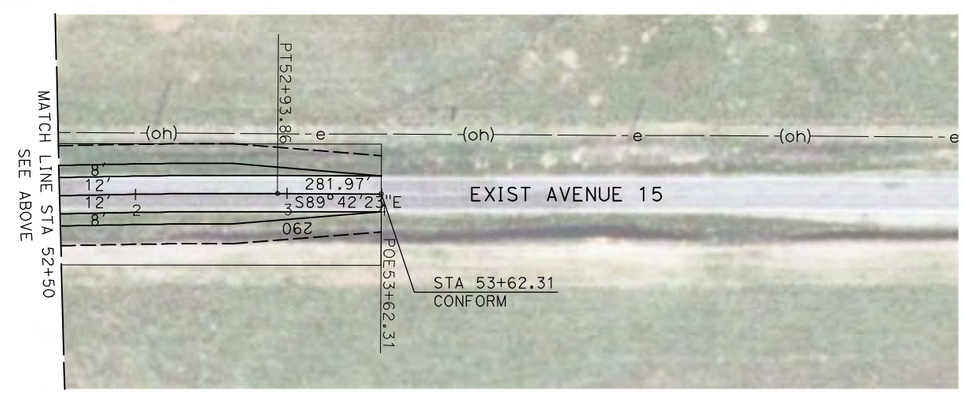
NO.	R	Δ	T	L	V
3	5000.00′	6°52′32"	300.36′	600.00′	45 MPH
4	5000.00′	6°52′32"	300.36′	600.00′	45 MPH



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1015-A THROUGH CT1017-A.





50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 15
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0019-A
SCALE AS SHOWN
SHEET NO. ### OF ###

6/28/2011 4:28:02 PM I:\chsr\60022962\task-02_merced-fresno\cadd\civil\Sheet\ROADWAY\Hybrid-Ave21\Volume 1 - Ave21Hybrid Grade Separation\Layout\Common with Ave 21\MF-CT-0019-A.dgn
GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
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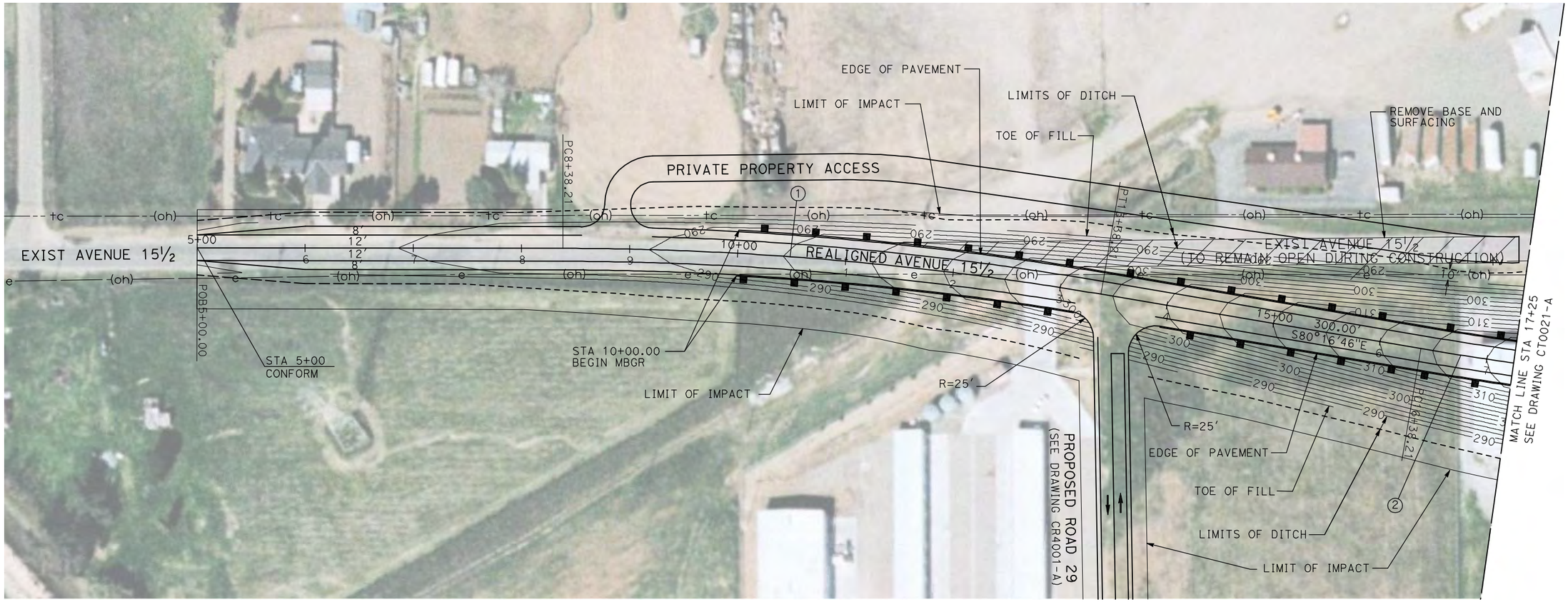
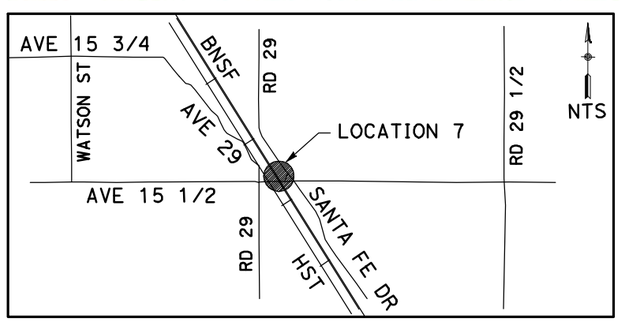
2	3000.00′	9°32′57″	250.58′	500.00′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1018-A THROUGH CT1020-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

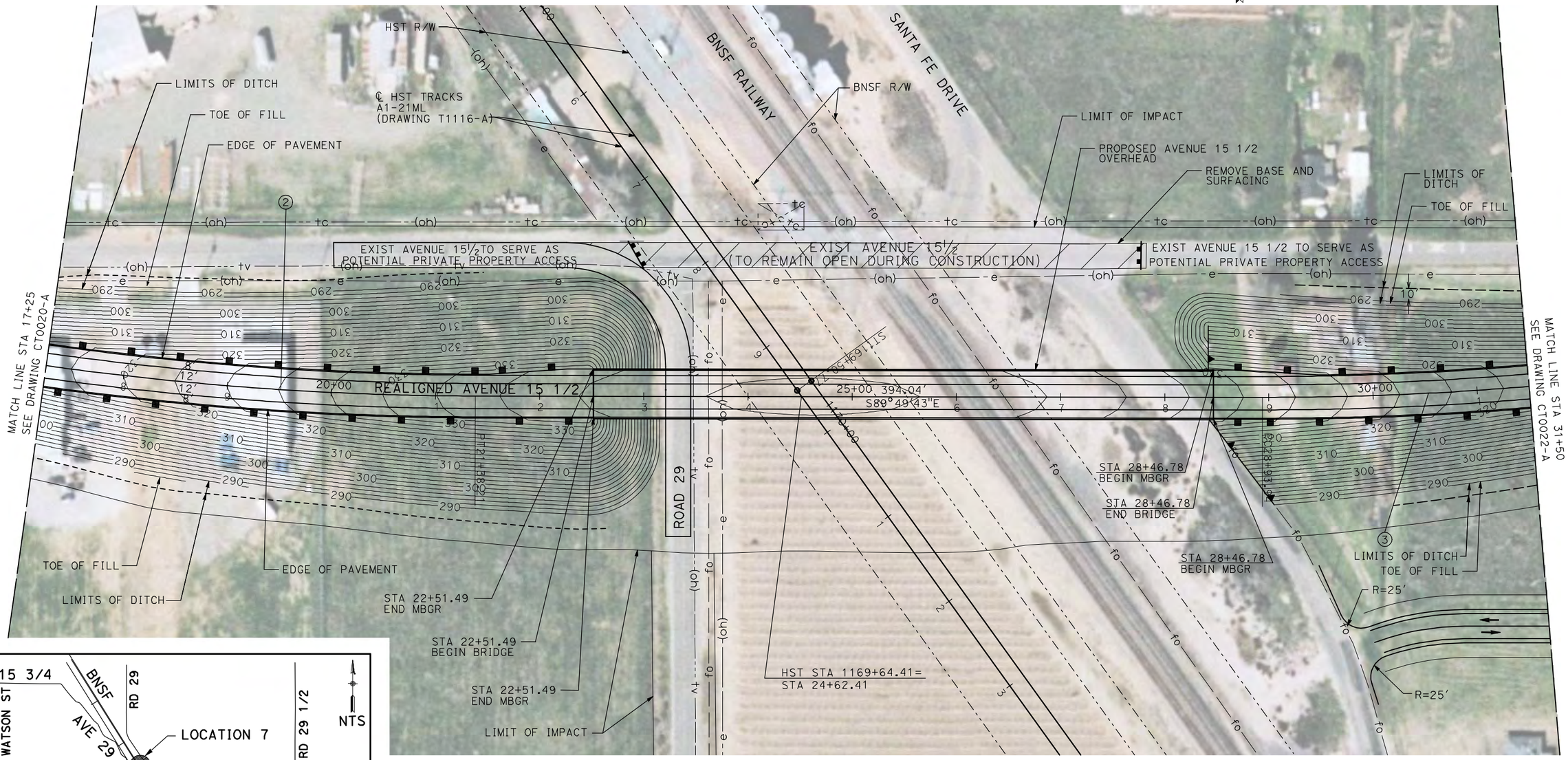
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 15 1/2
LAYOUT
SHEET 1 OF 3

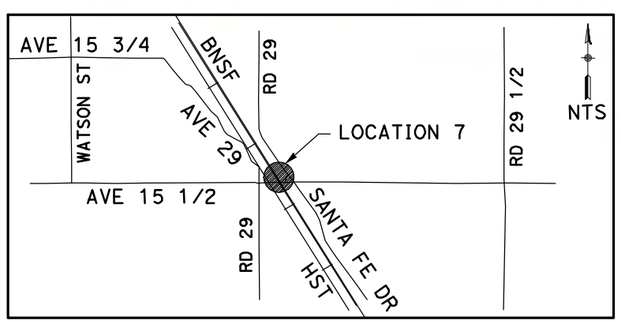
CONTRACT NO. HST06-007
DRAWING NO. CT0020-A
SCALE AS SHOWN
SHEET NO. ### OF ###

GibsonR1 6/28/2011 4:28:09 PM i:\chsr\60022962\task-02_merced-fresno\cadd\civil\Sheet\ROADWAY\Hybrid-Ave21\Volume 1 - Ave21Hybrid Grade Separation\Layout\Common with Ave 21\MF-CT-0020-A.dgn

CURVE DATA

NO.	R	Δ	T	L	V
②	3000.00′	9°32′57″	250.58′	500.00′	45 MPH
③	3000.00′	9°32′57″	250.58′	500.00′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1018-A THROUGH CT1020-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 15 1/2
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0021-A
SCALE AS SHOWN
SHEET NO. ### OF ###

i:\chsr\60022962\task-02_merced-fresno\cadd\civil\Sheet\ROADWAY\Hybrid-Ave21\Volume 1 - Ave21Hybrid Grade Separation\Layout\Common with Ave 21\MF-CT-0021-A.dgn 6/28/2011 4:28:16 PM GibsonR1

CURVE DATA

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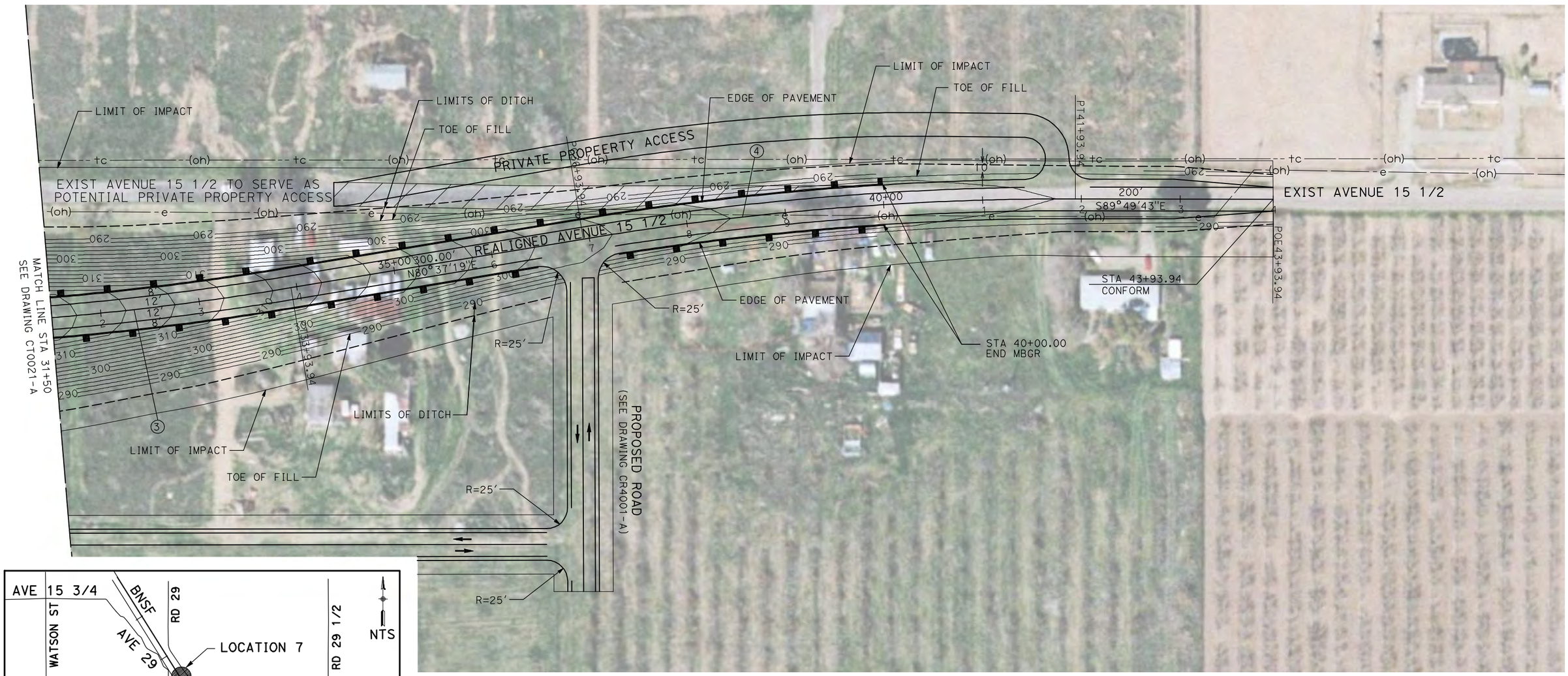
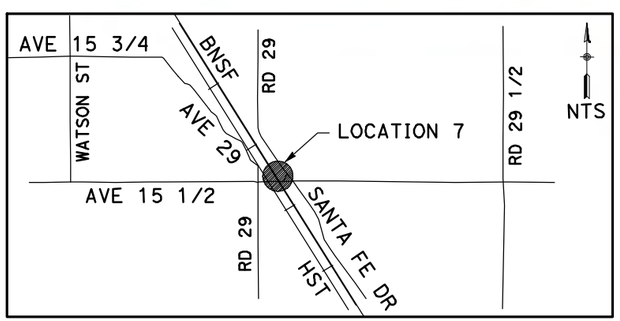
4	3000.00′	9°32′57″	250.58′	500.00′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1018-A THROUGH CT1020-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

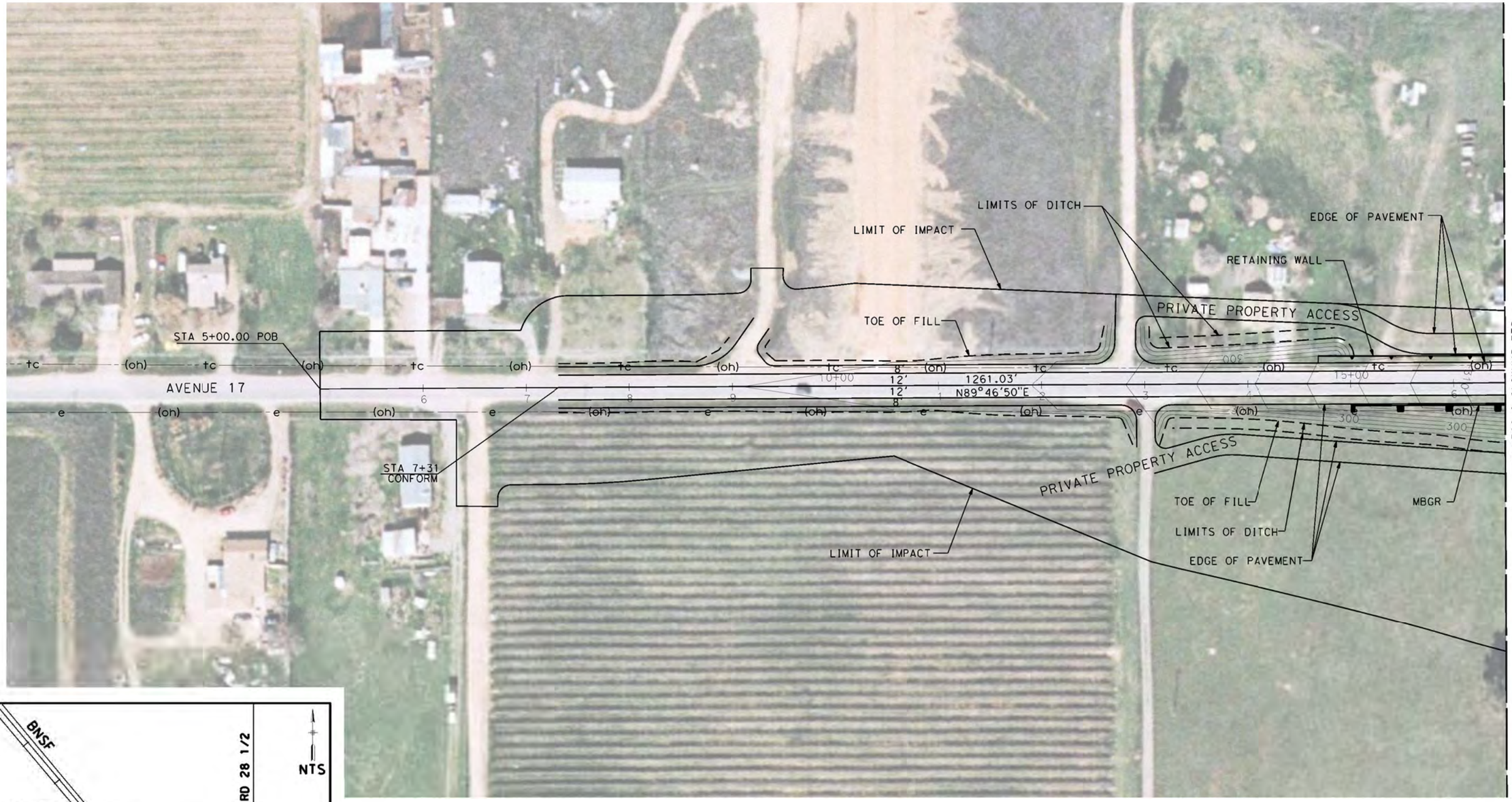
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

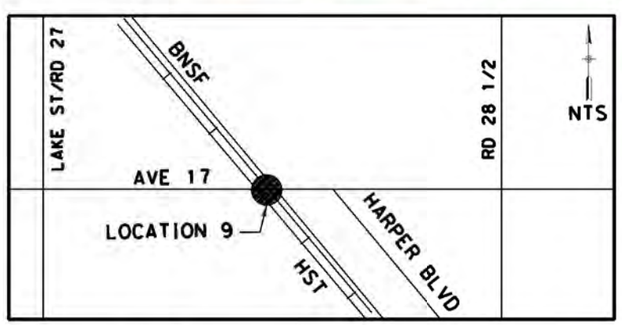
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 15 1/2
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0022-A
SCALE AS SHOWN
SHEET NO. ### OF ###

i:\chsr\60022962\task-02_merced-fresno\cadd\civil\Sheet\ROADWAY\Hybrid-Ave21\Volume 1 - Ave21Hybrid Grade Separation\Layout\Common with Ave 21\MF-CT-0022-A.dgn 6/28/2011 4:28:25 PM GibsonR1





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1024-A THROUGH CT1026-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

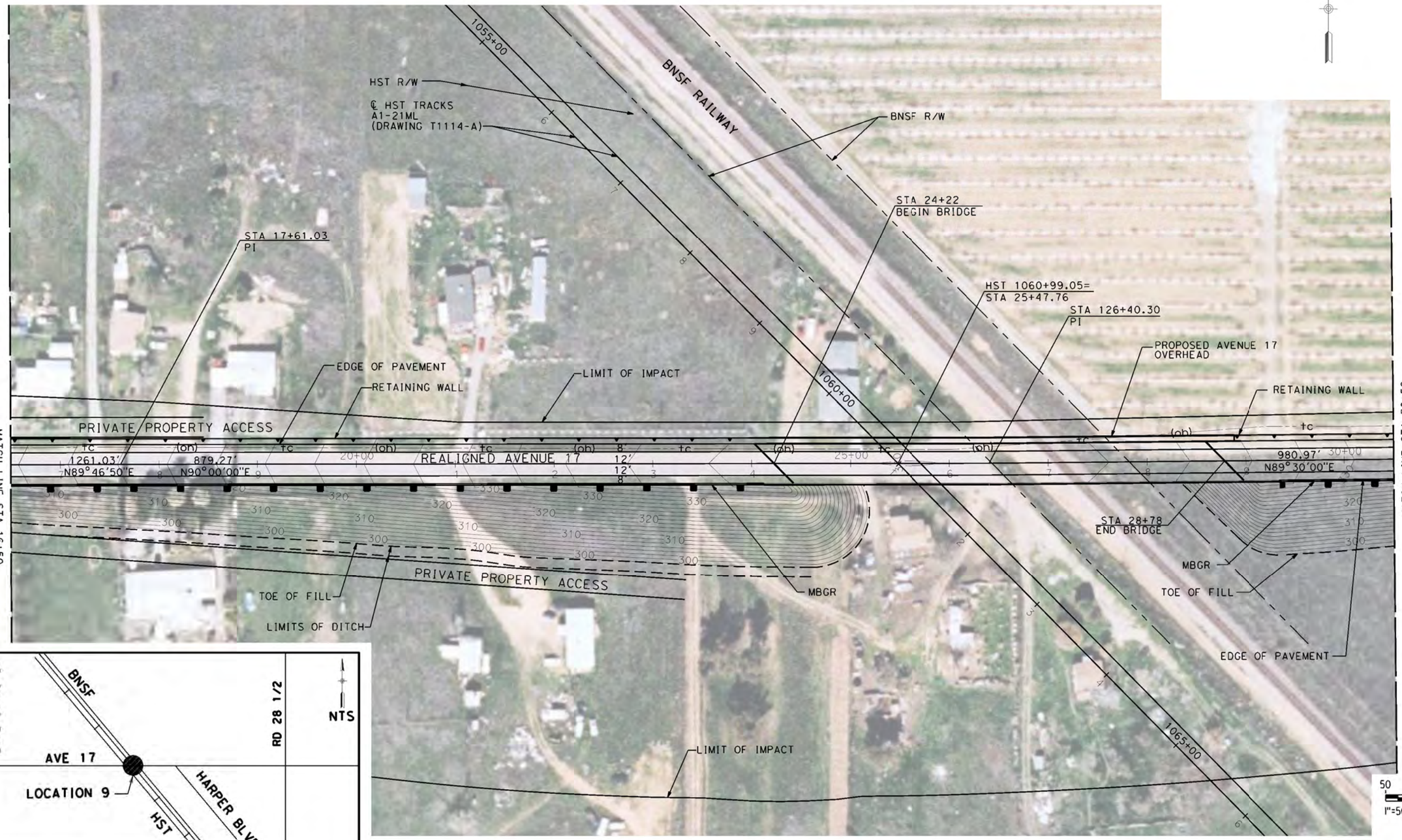
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID MAIN LINE - (AVE 21 WYE)
GRADE SEPARATION - AVENUE 17
LAYOUT
SHEET 1 OF 3

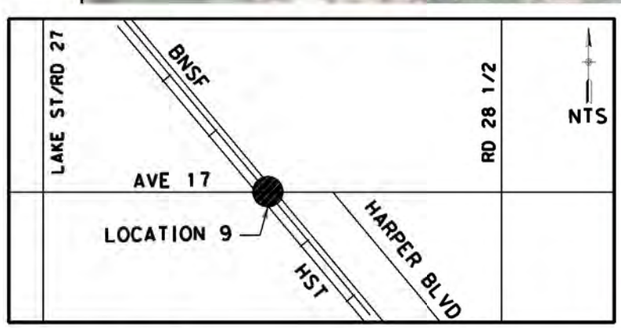
CONTRACT NO. HST06-007
DRAWING NO. CT0026-A
SCALE AS SHOWN
SHEET NO. OF ###

4/3/2012 6:44:32 PM C:\Projects\356751 - California High Speed Rail - Merced to Fresno\AECOM\BNSF\MF-CT-0026-A.dgn
lros

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1024-A THROUGH CT1026-A.





REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID MAIN LINE - (AVE 21 WYE)
GRADE SEPARATION - AVENUE 17
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0027-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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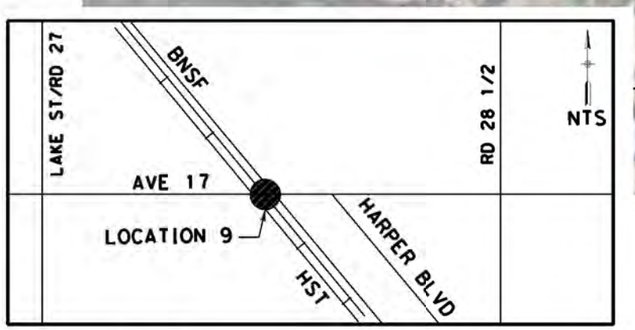
lros



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1024-A THROUGH CT1026-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID MAIN LINE - (AVE 21 WYE)
GRADE SEPARATION - AVENUE 17
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0028-A
SCALE AS SHOWN
SHEET NO. OF ###

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lros

CURVE DATA

NO.	R	Δ	T	L	V
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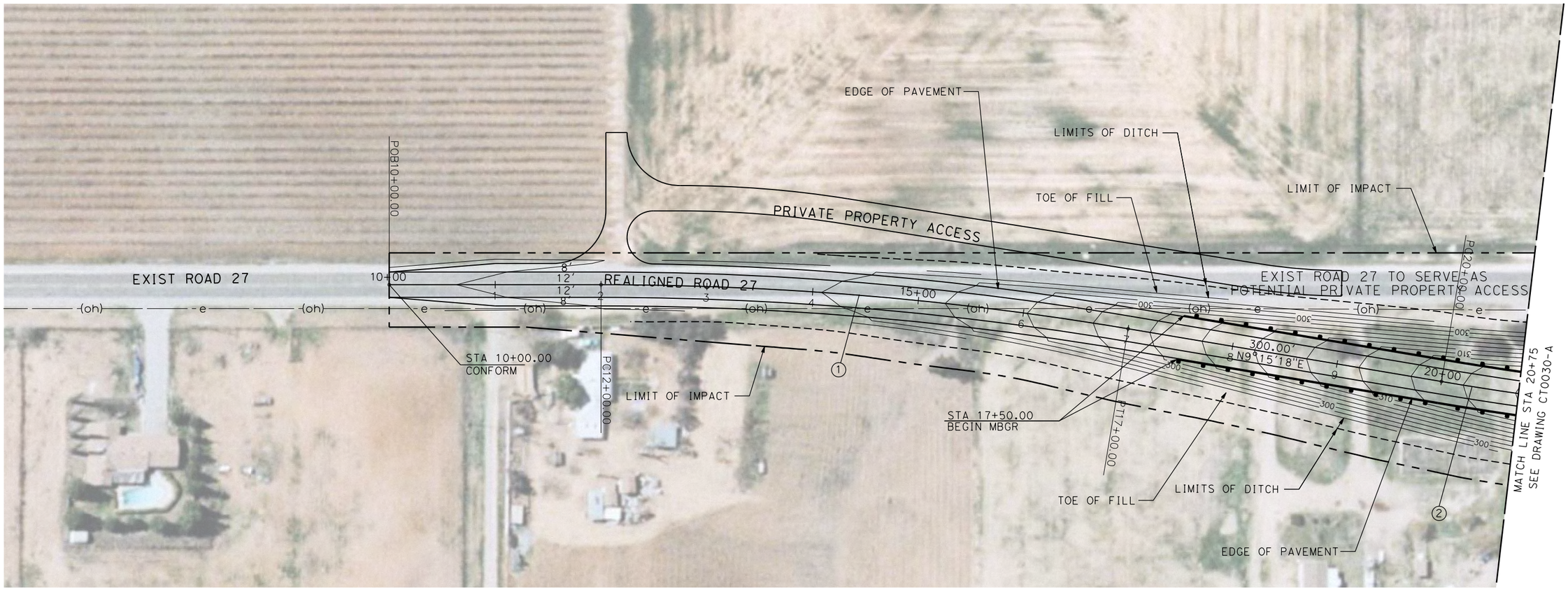
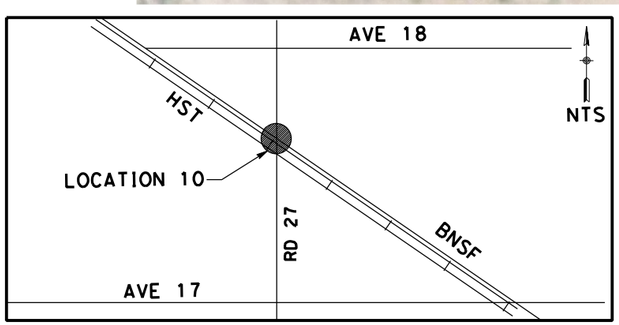
2	3000.00′	9°32′57″	250.58′	500.00′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1029-A THROUGH CT1031-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 27
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0029-A
SCALE AS SHOWN
SHEET NO. ### OF ###

DeMarcoF 4/5/2012 4:13:42 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Volume III APRIL 2012\PART 1\L1\MF-CT-0029-

CURVE DATA

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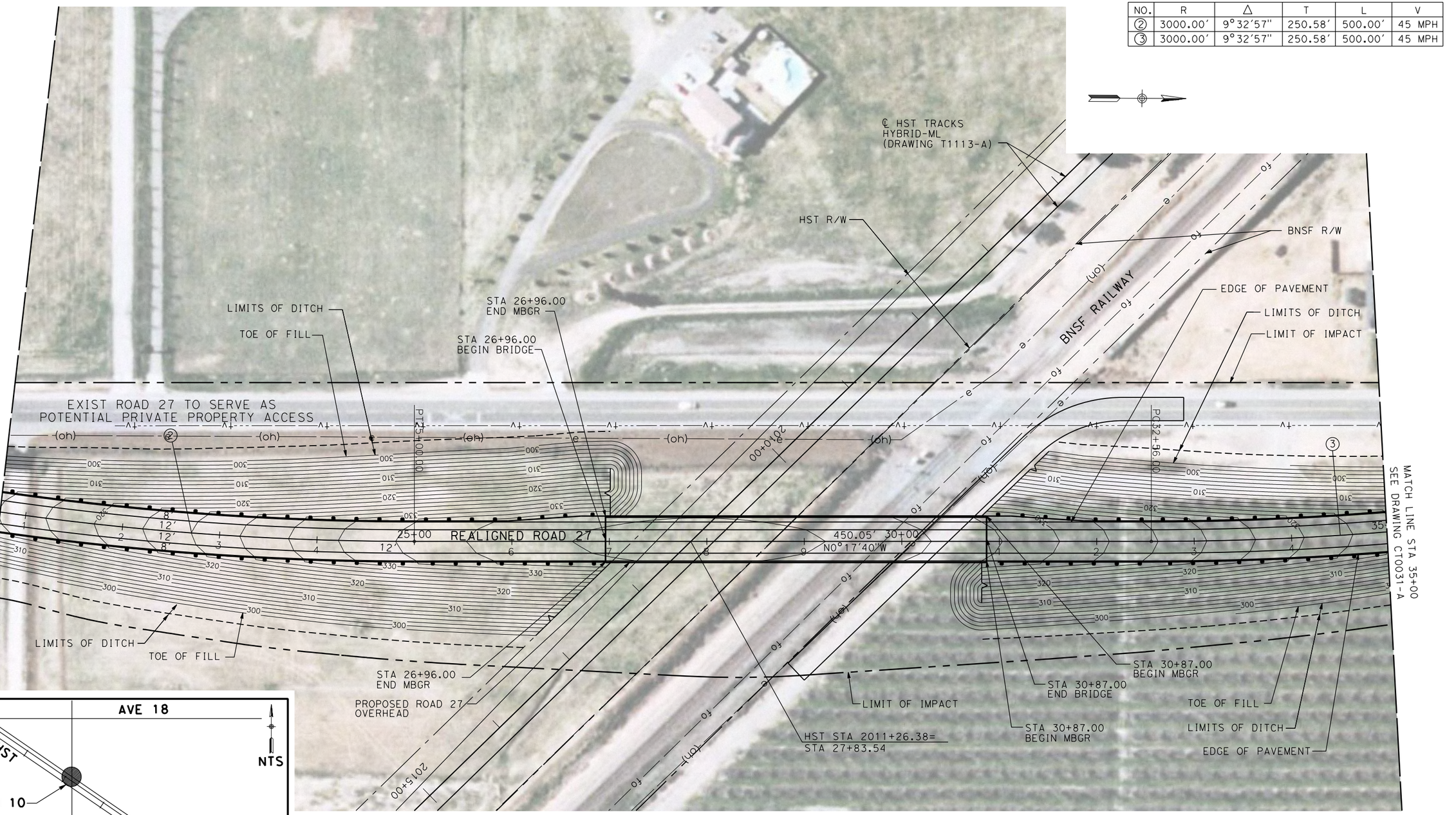

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1029-A THROUGH CT1031-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 27
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0030-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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CURVE DATA

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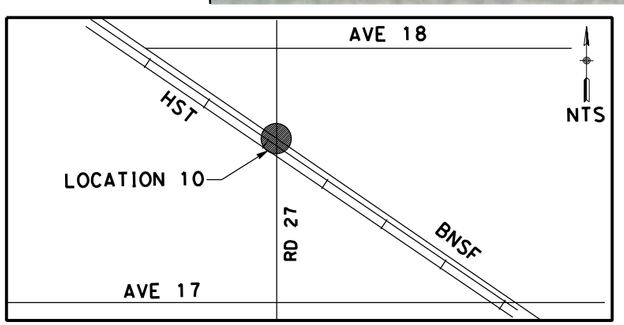

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1029-A THROUGH CT1031-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 27
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0031-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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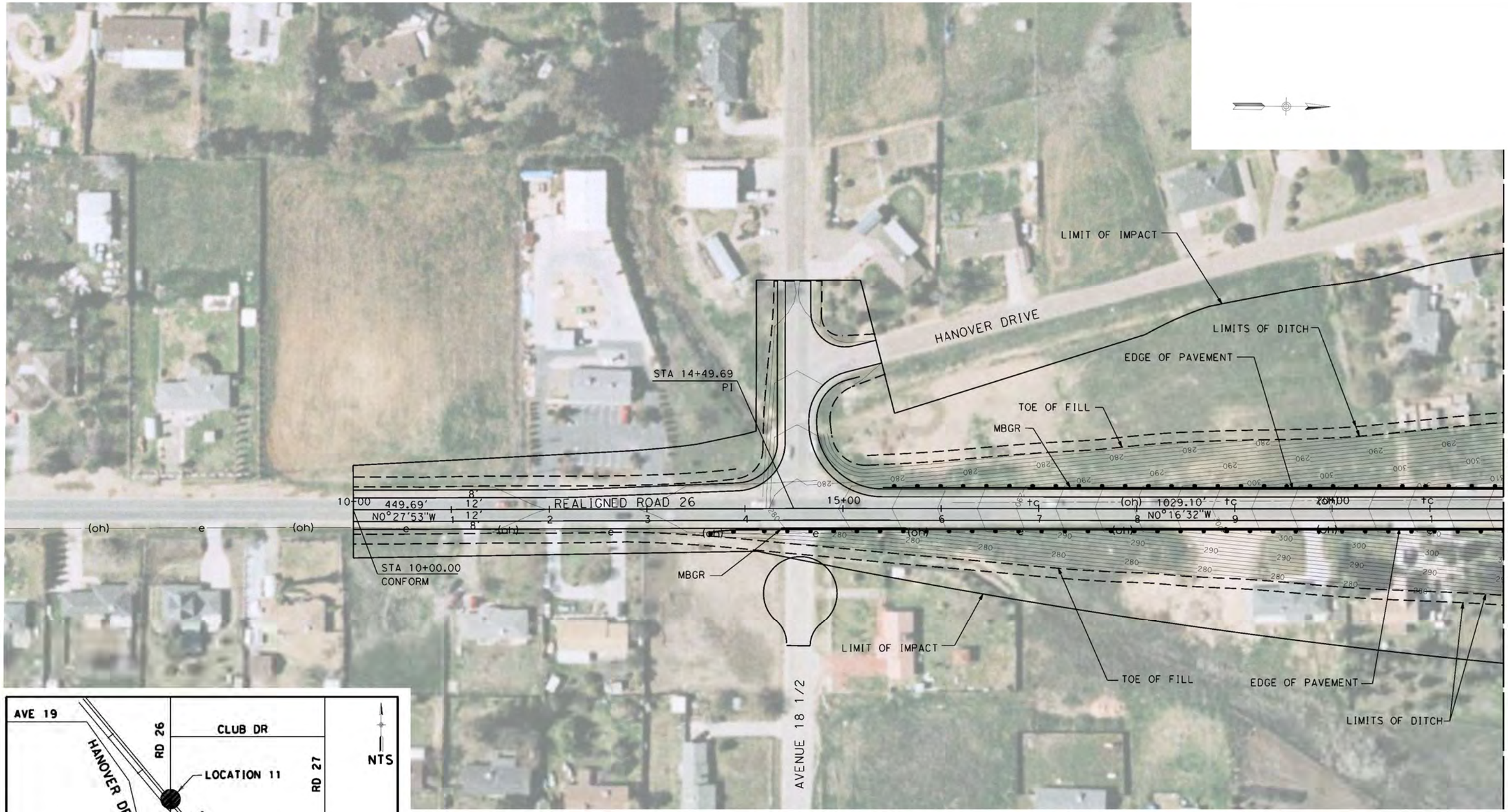

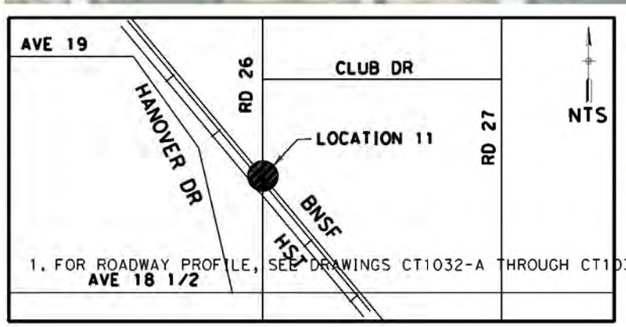

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1032-A THROUGH CT1034-A.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
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Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID MAIN LINE - (AVE 21 WYE)
GRADE SEPARATION - ROAD 26
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0032-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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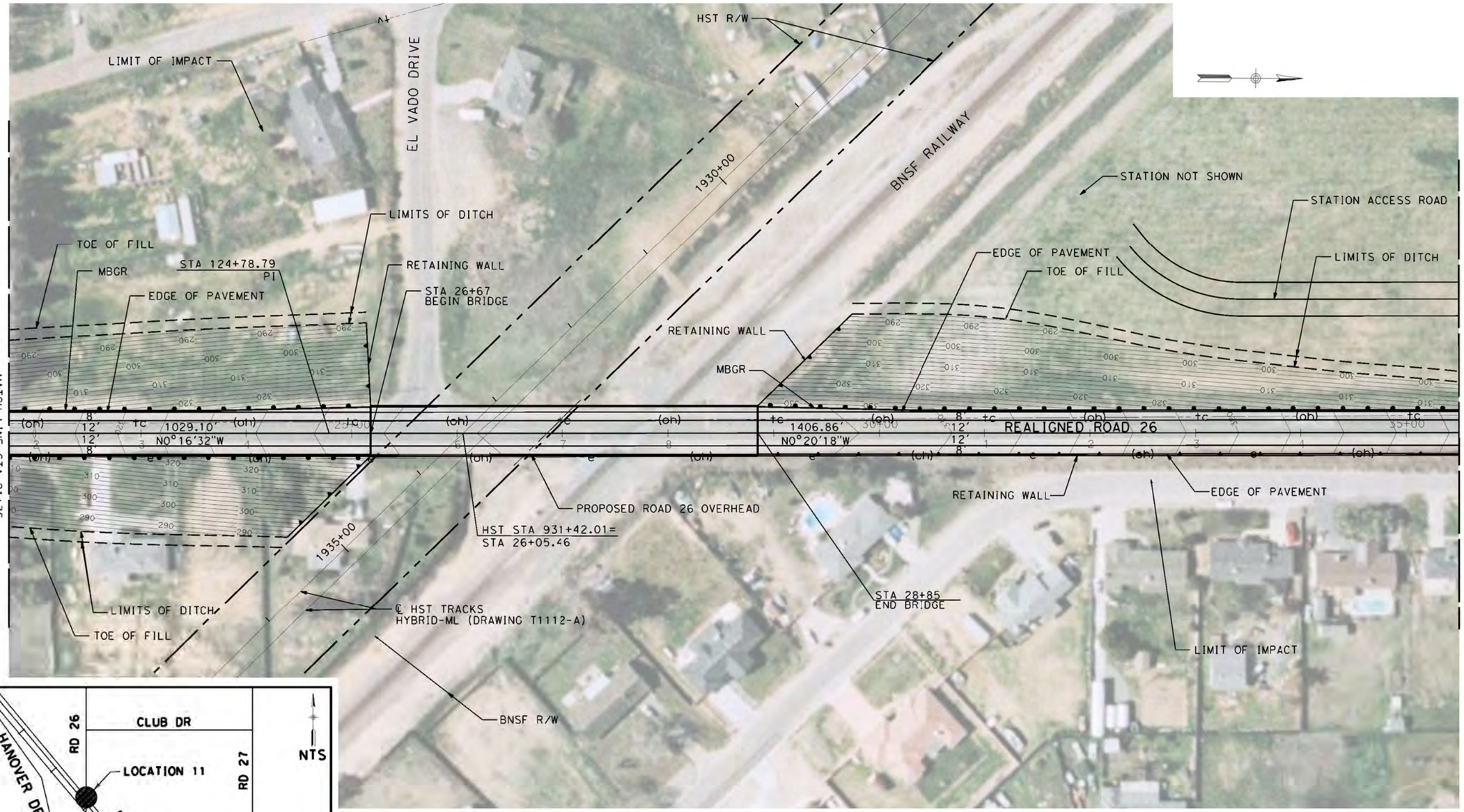
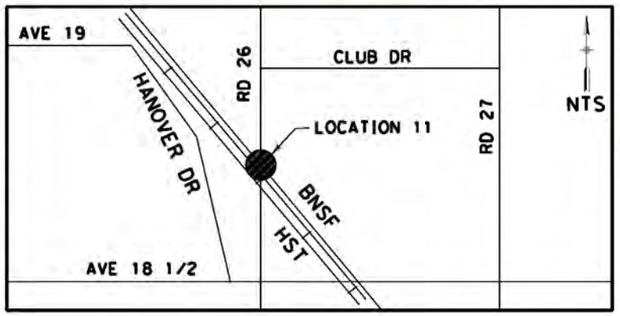
Iros





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1032-A THROUGH CT1034-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID MAIN LINE - (AVE 21 WYE)
GRADE SEPARATION - ROAD 26
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0033-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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lros

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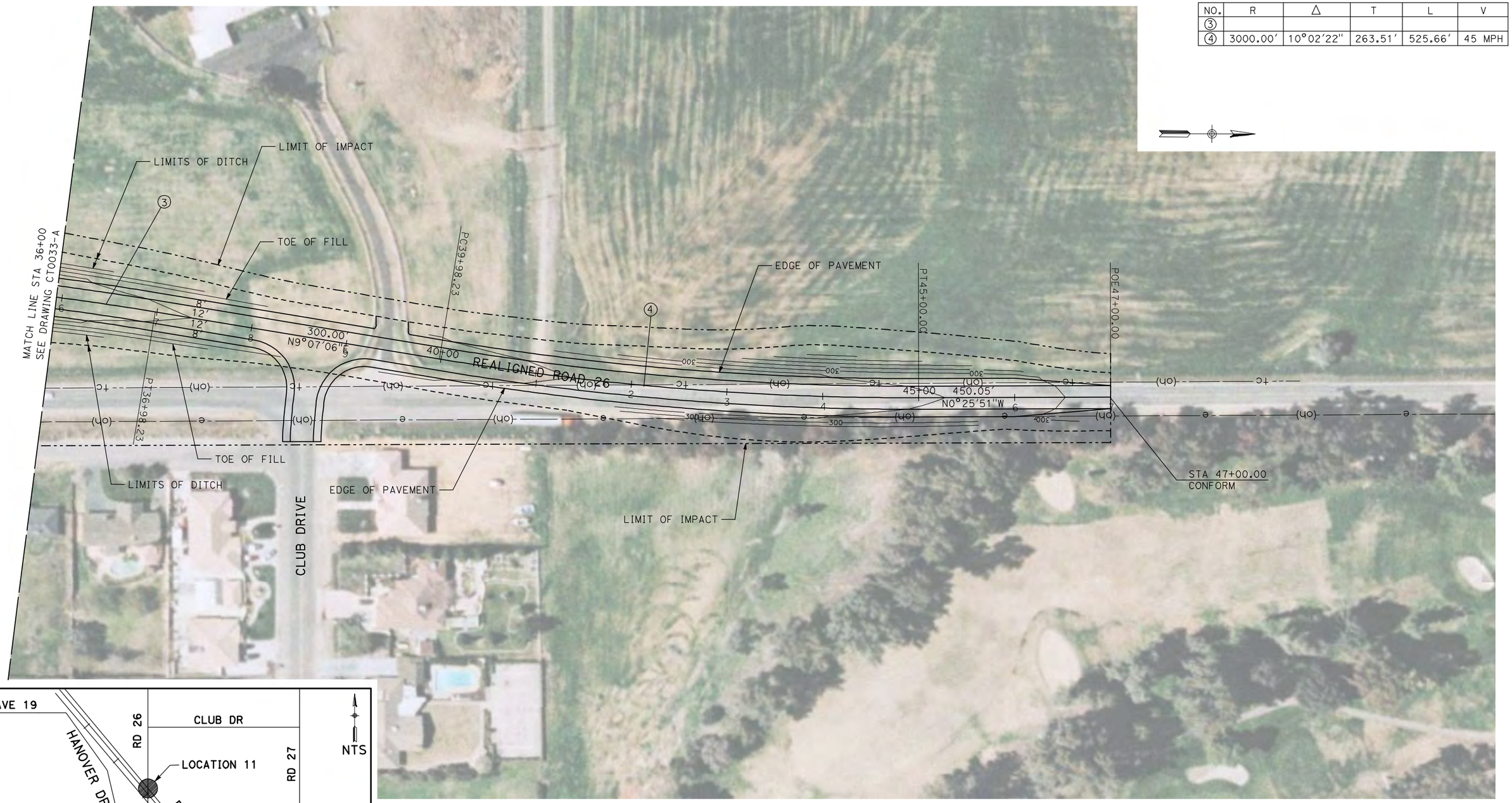

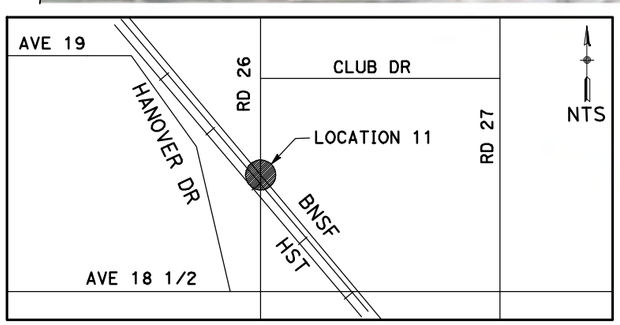

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1032-A THROUGH CT1034-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 26
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0034-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
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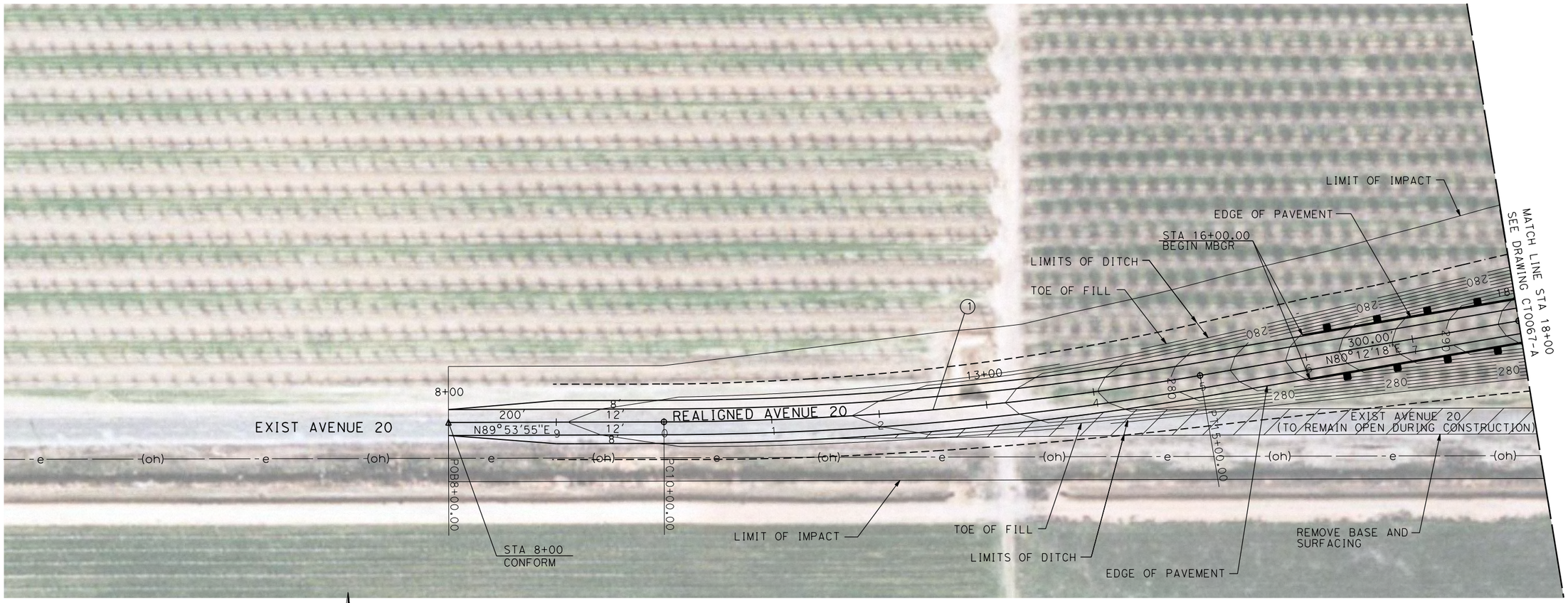

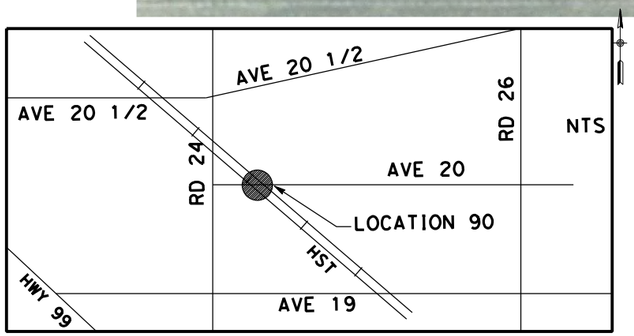

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1063-A THROUGH CT1065-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN
SUBMITTAL

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 20
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT0066-A
SCALE AS SHOWN
SHEET NO. ### OF ###

DeMarcoF 4/5/2012 4:16:41 PM \\usscrtfp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Volume III APRIL 2012\PART 1\L1\MF-CT-0066-

CURVE DATA

NO.	R	Δ	T	L	V
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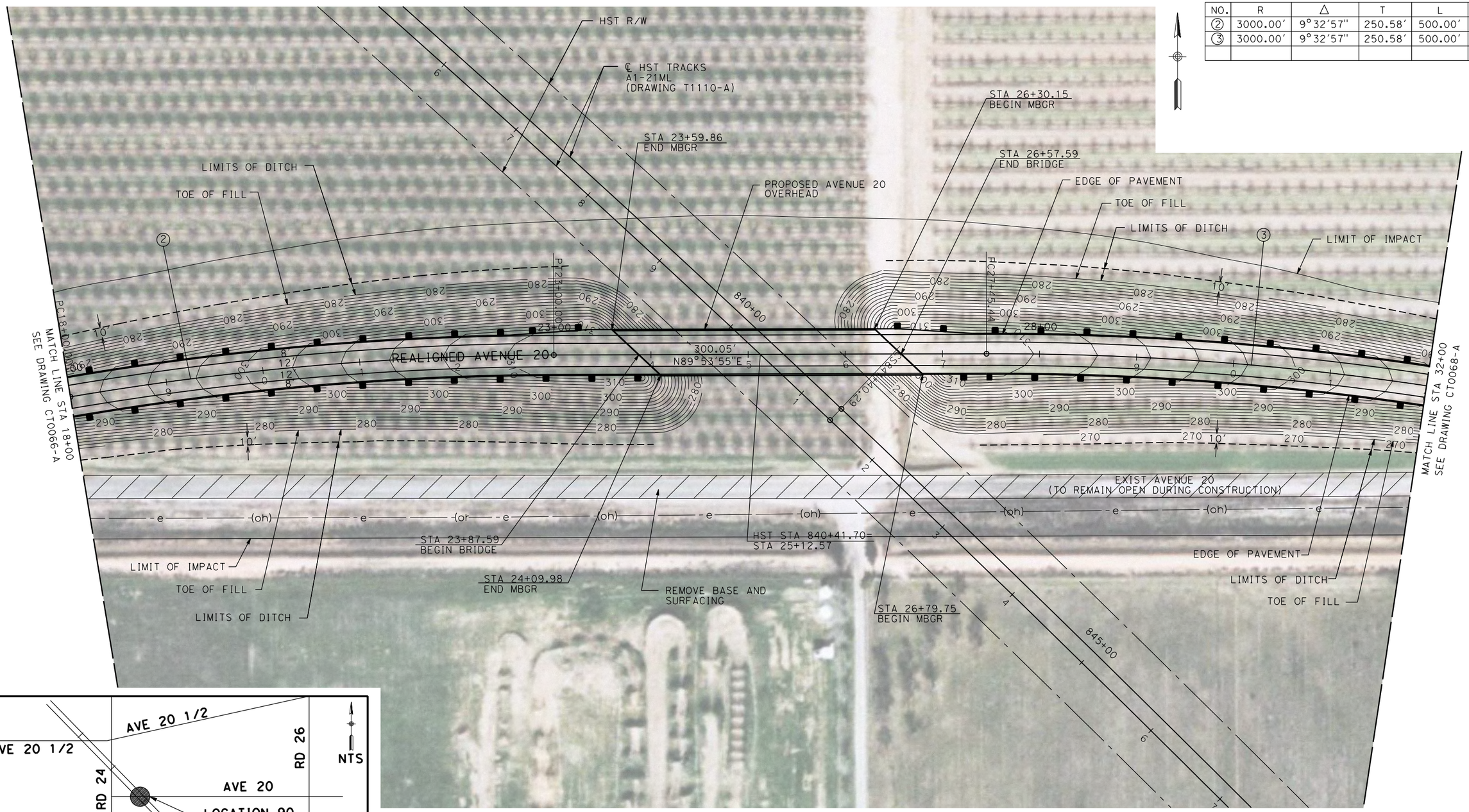

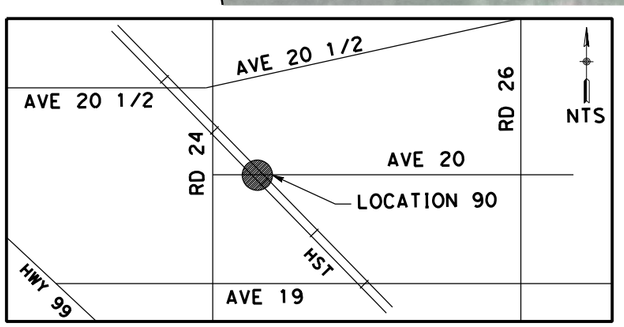

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1063-A THROUGH CT1065-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN
SUBMITTAL

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 20
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0067-A
SCALE AS SHOWN
SHEET NO. ### OF ###

4/5/2012 4:17:28 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Volume III APRIL 2012\PART 1\L1\MF-CT-0067-
DeMarcoF

CURVE DATA

NO.	R	Δ	T	L	V
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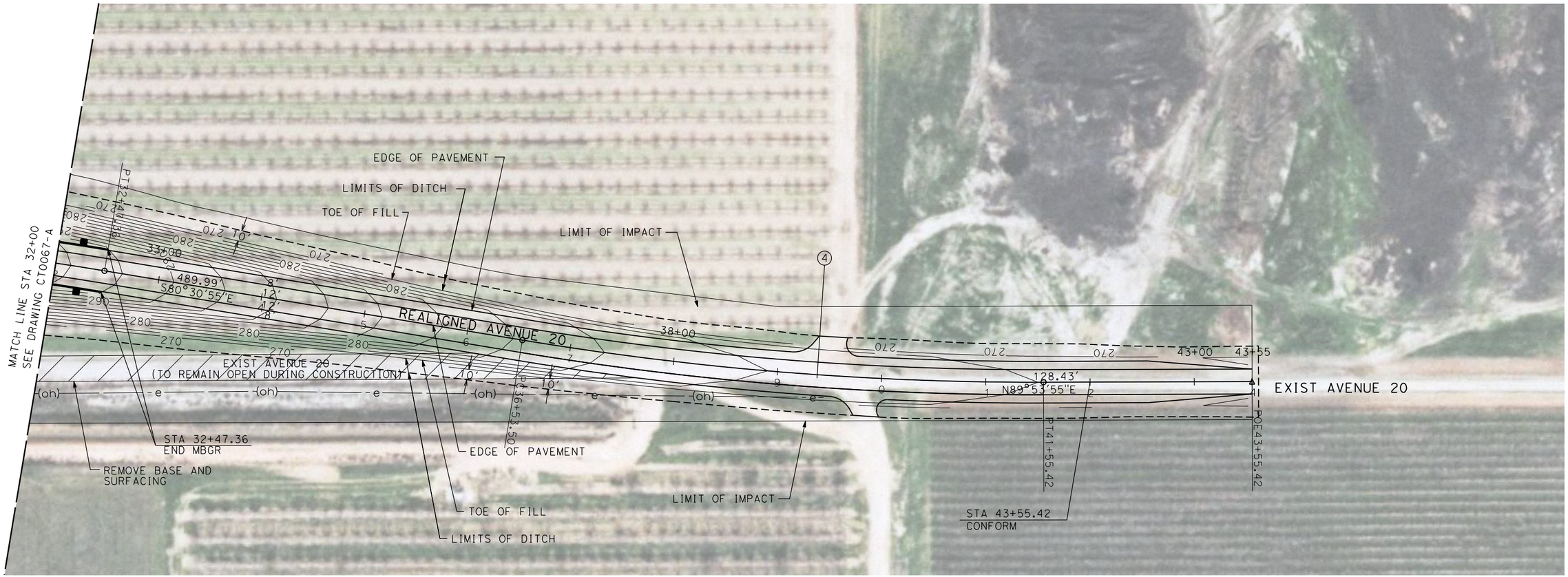

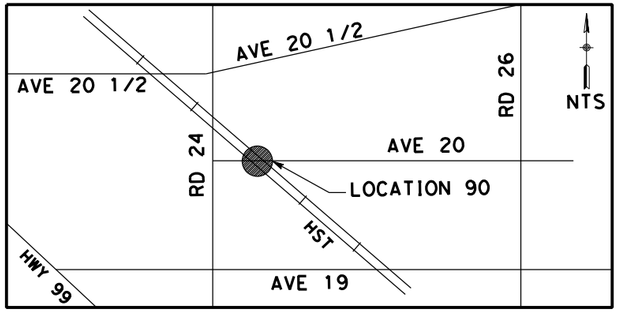

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1063-A THROUGH CT1065-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 20
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT0068-A
SCALE AS SHOWN
SHEET NO. ### OF ###

4/5/2012 4:18:14 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Volume III APRIL 2012\PART 1\L1\MF-CT-0068-
DeMarcoF

CURVE DATA

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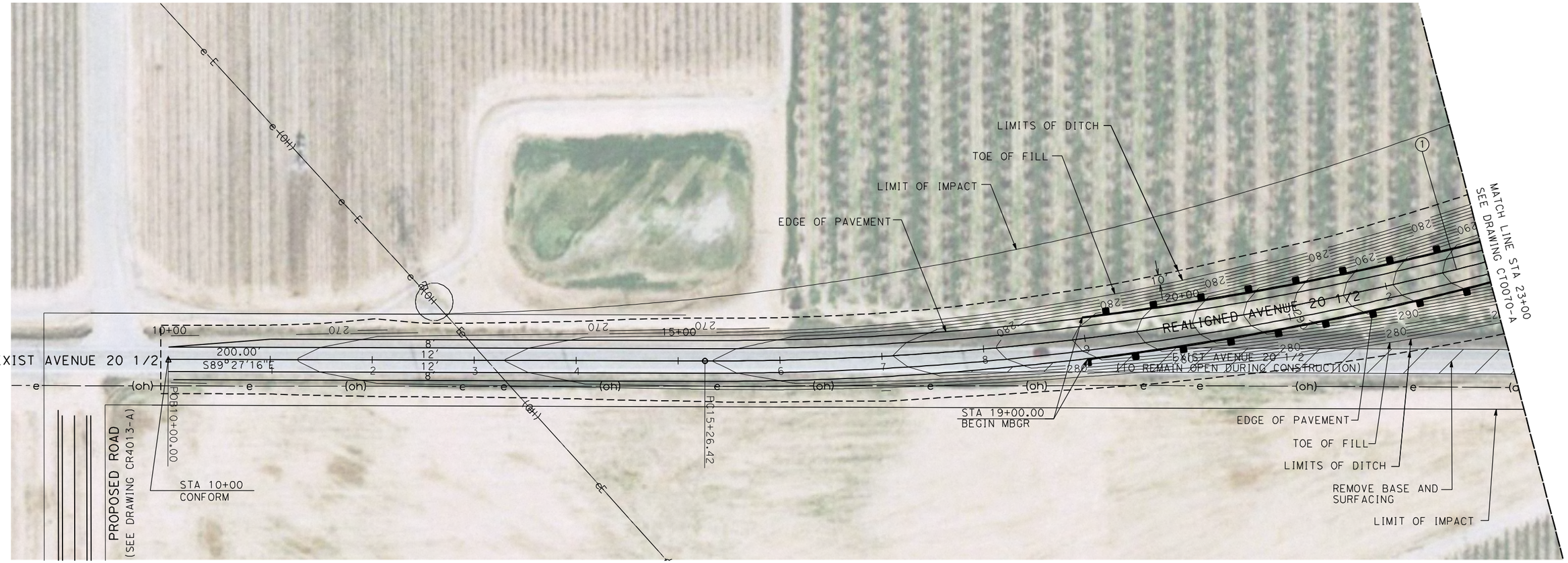

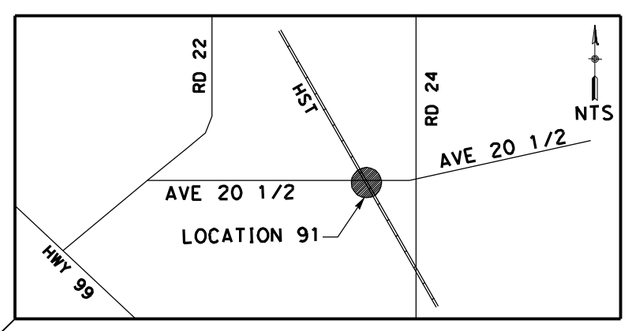

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1066-A THROUGH CT1068-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 20 1/2
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0069-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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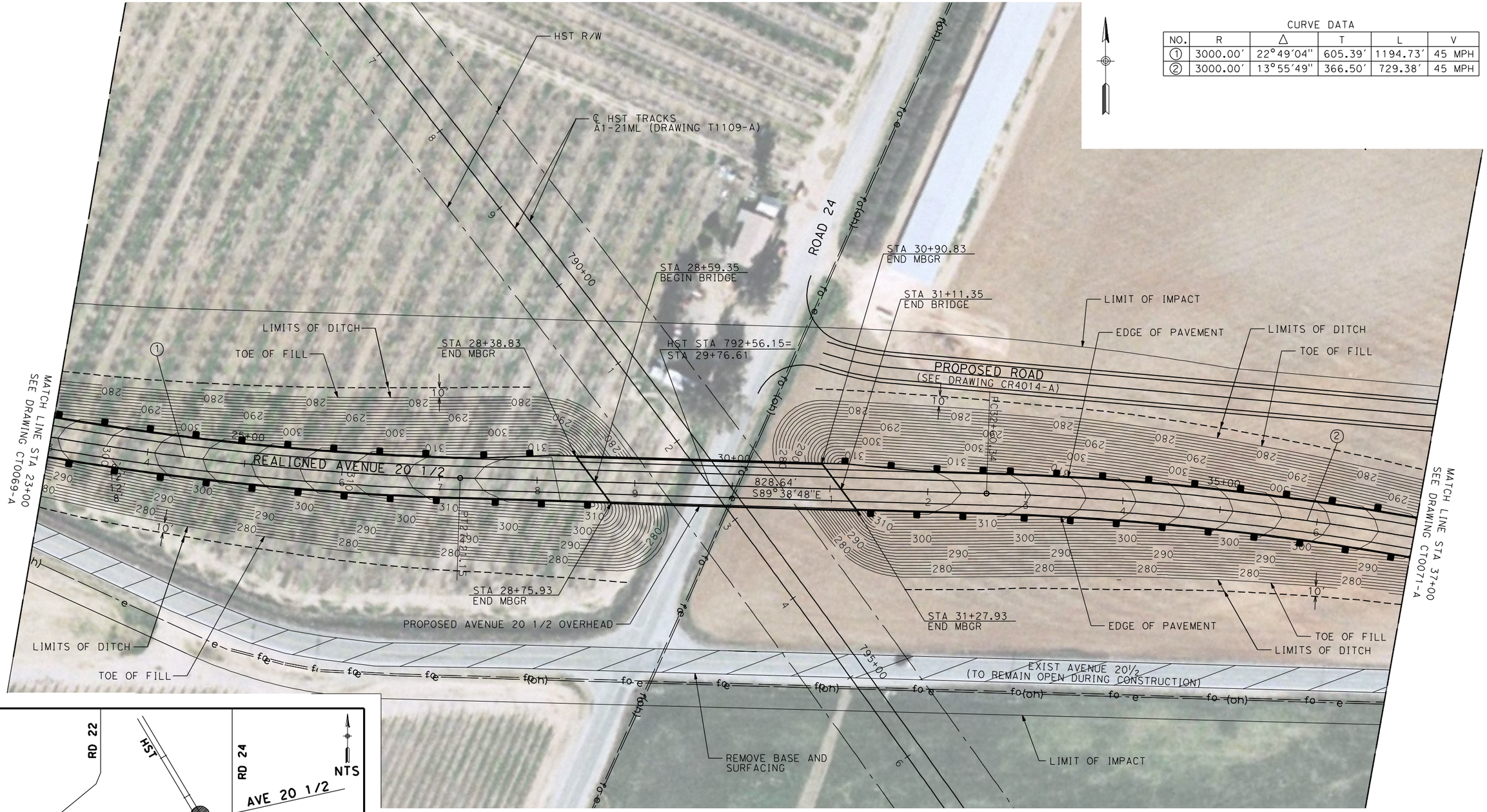
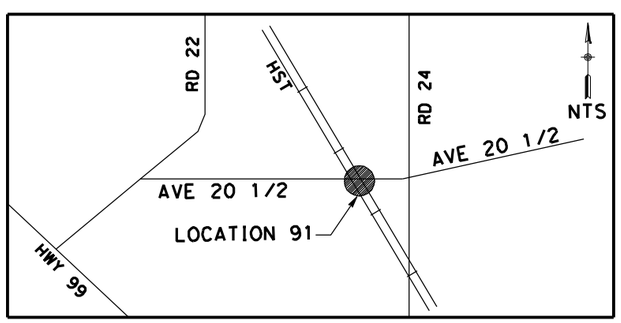
USER=ReyesC1 4/5/2012 8:31:19 AM \\usstc2fp001\projects\60022962\task-03_merced-fresno\cadd\civil\design\santa clara\delosreyesc\15% roadway revisions\vol iii final submittal\roadway\sheet\figure 1 -





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1066-A THROUGH CT1068-A.

CURVE DATA

NO.	R	Δ	T	L	V
1	3000.00'	22°49'04"	605.39'	1194.73'	45 MPH
2	3000.00'	13°55'49"	366.50'	729.38'	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 20 1/2
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT0070-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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CURVE DATA

NO.	R	Δ	T	L	V
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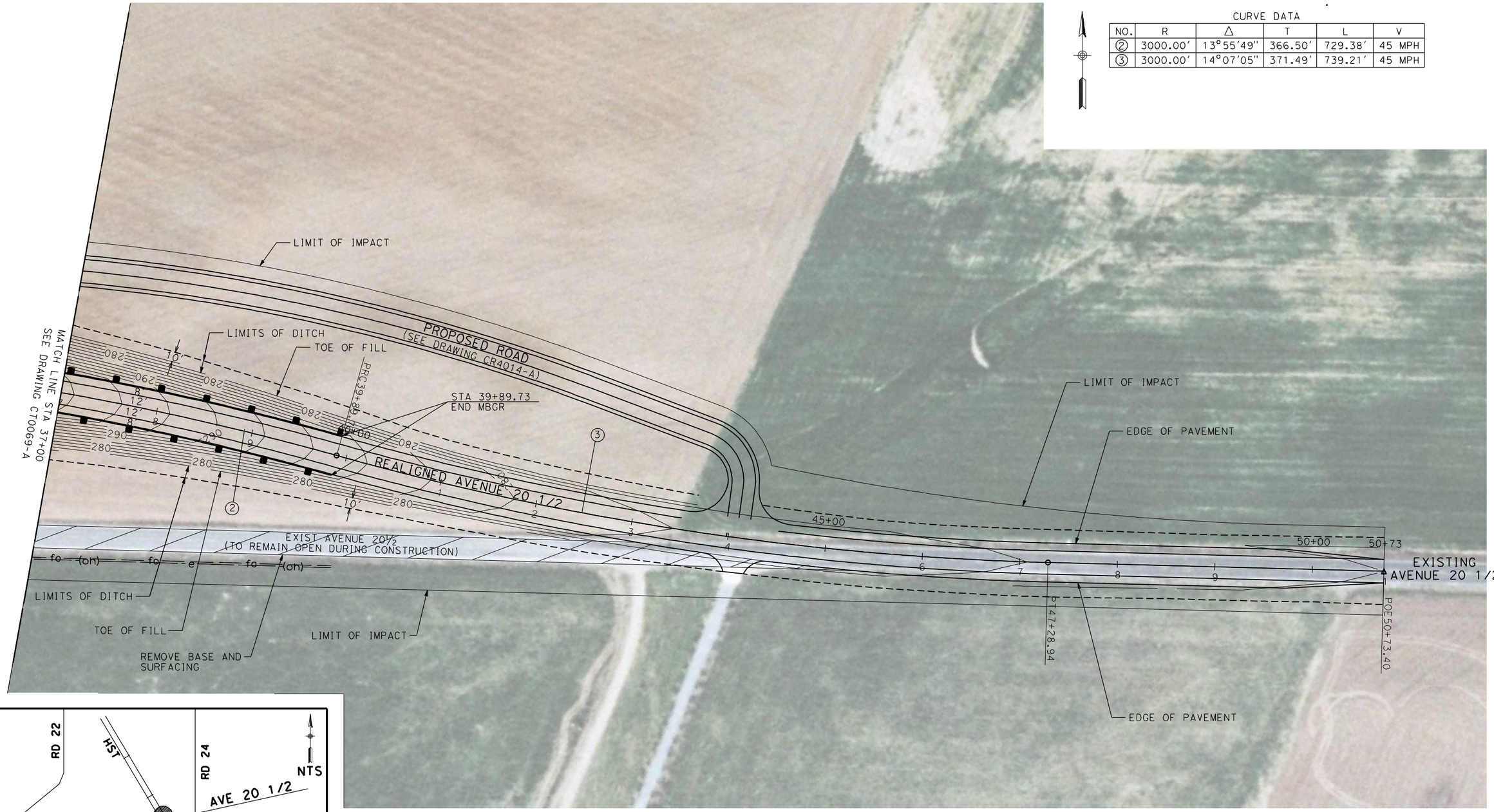

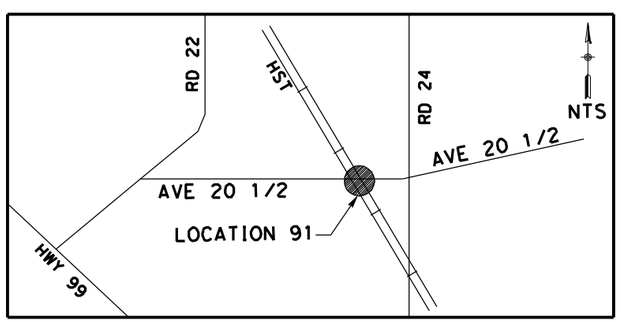

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1066-A THROUGH CT1068-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN
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Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 20 1/2
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT0071-A
SCALE AS SHOWN
SHEET NO. ### OF ###

CURVE DATA

NO.	R	Δ	T	L	V
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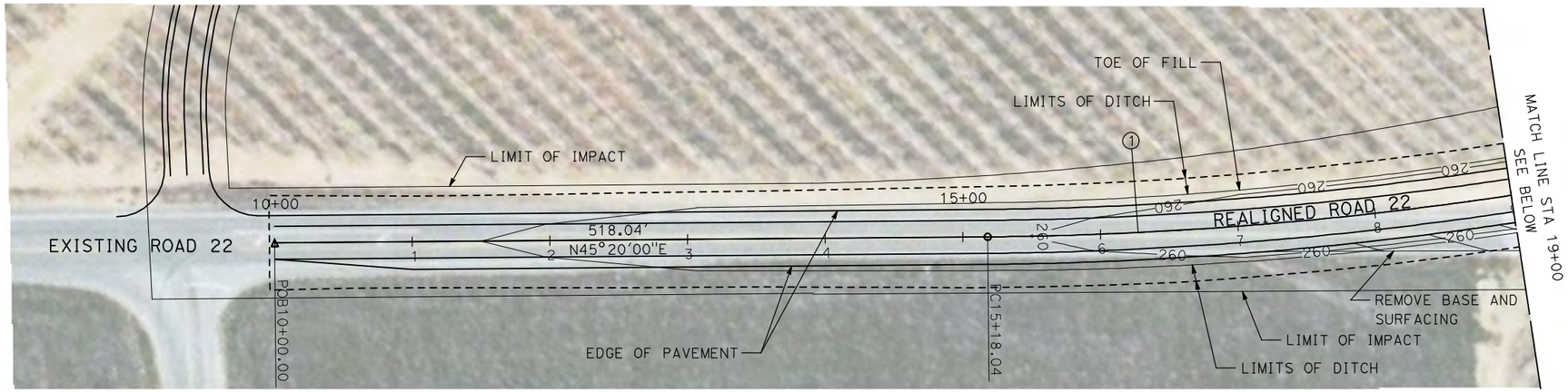

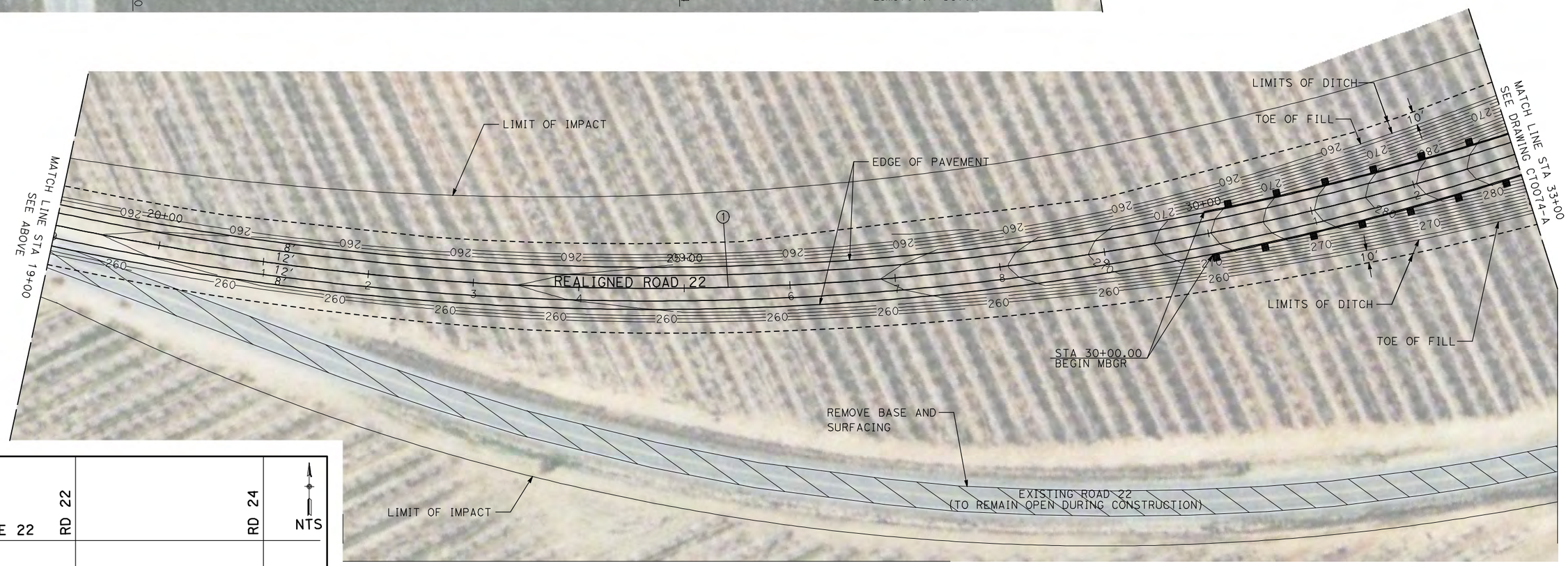

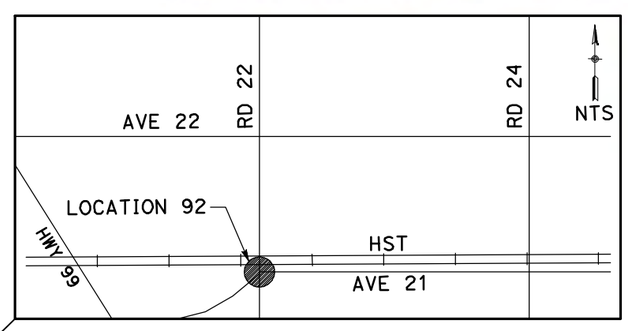

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1069-A THROUGH CT1071-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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2020 L Street, Suite 300
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
UNDERPASS - ROAD 22
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0073-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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CURVE DATA

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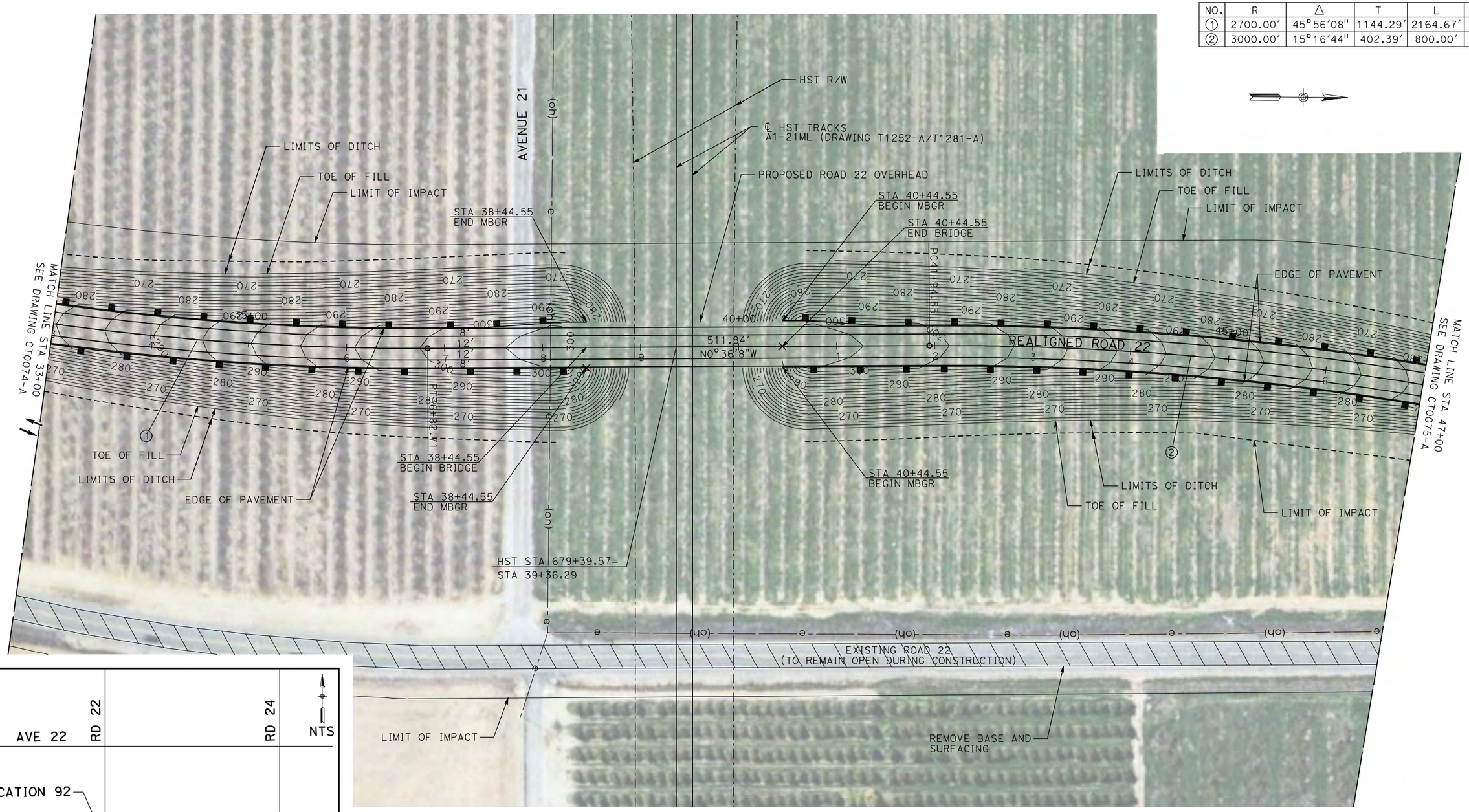

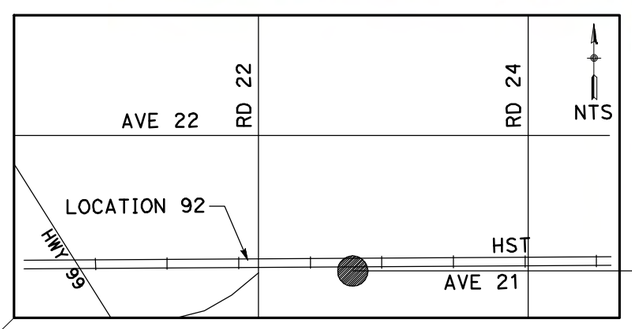

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1069-A THROUGH CT1071-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
UNDERPASS - ROAD 22
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT0074-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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GibsonR1

CURVE DATA

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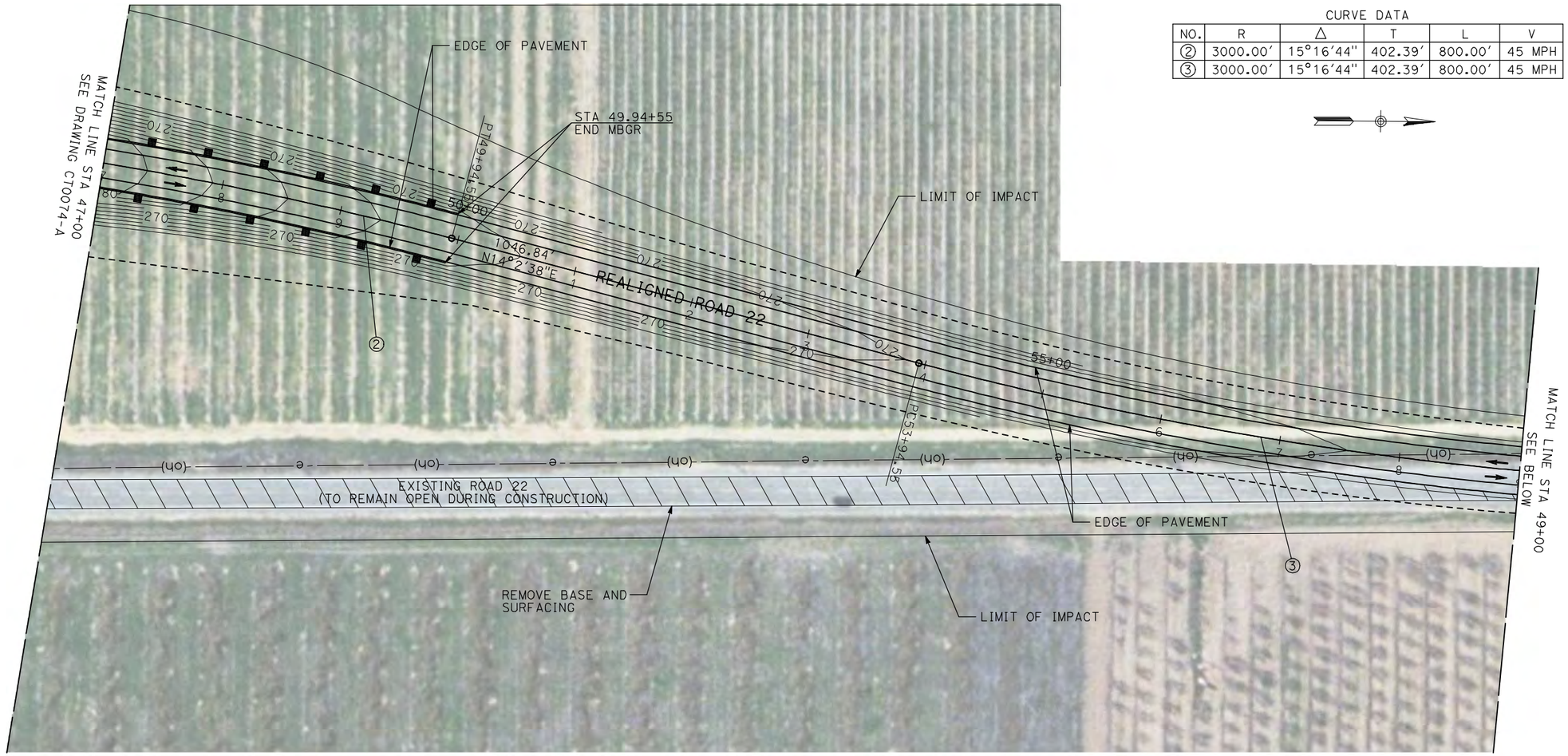
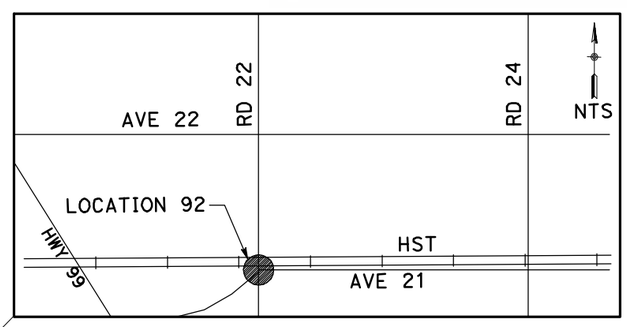
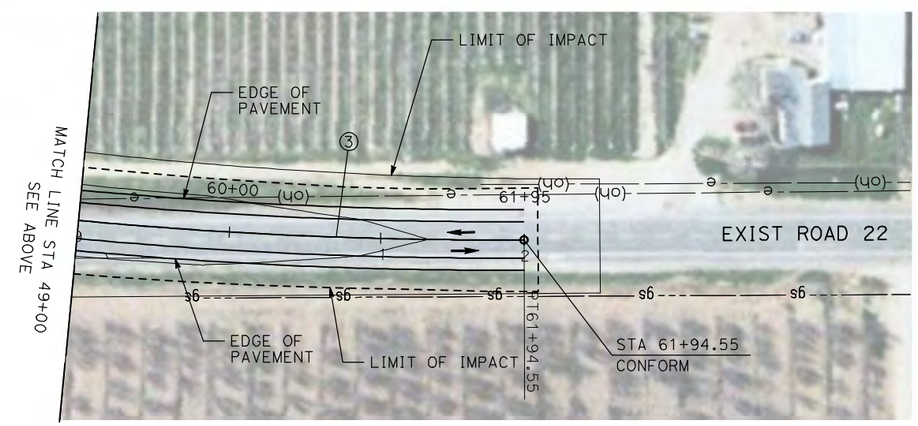
③	3000.00′	15°16′44″	402.39′	800.00′	45 MPH



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1069-A THROUGH CT1071-A.





50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
UNDERPASS - ROAD 22
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT0075-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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CURVE DATA

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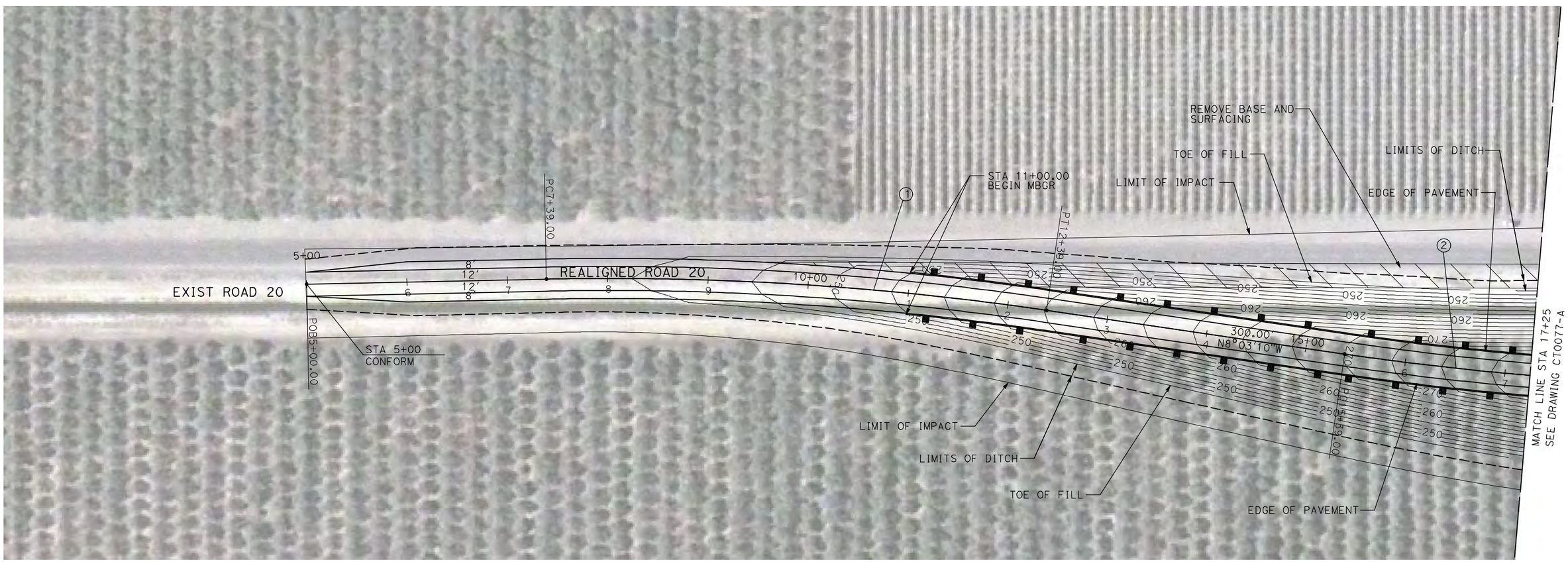

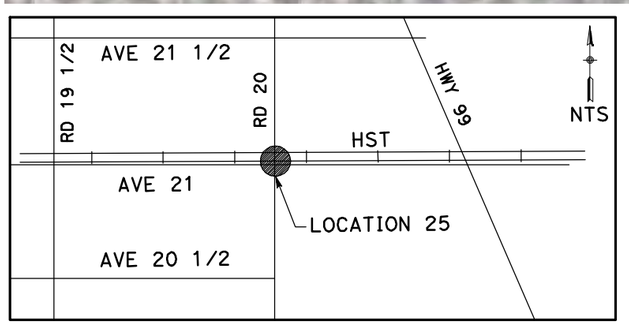

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1072-A THROUGH CT1074-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 20
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT0076-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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GibsonR1

CURVE DATA

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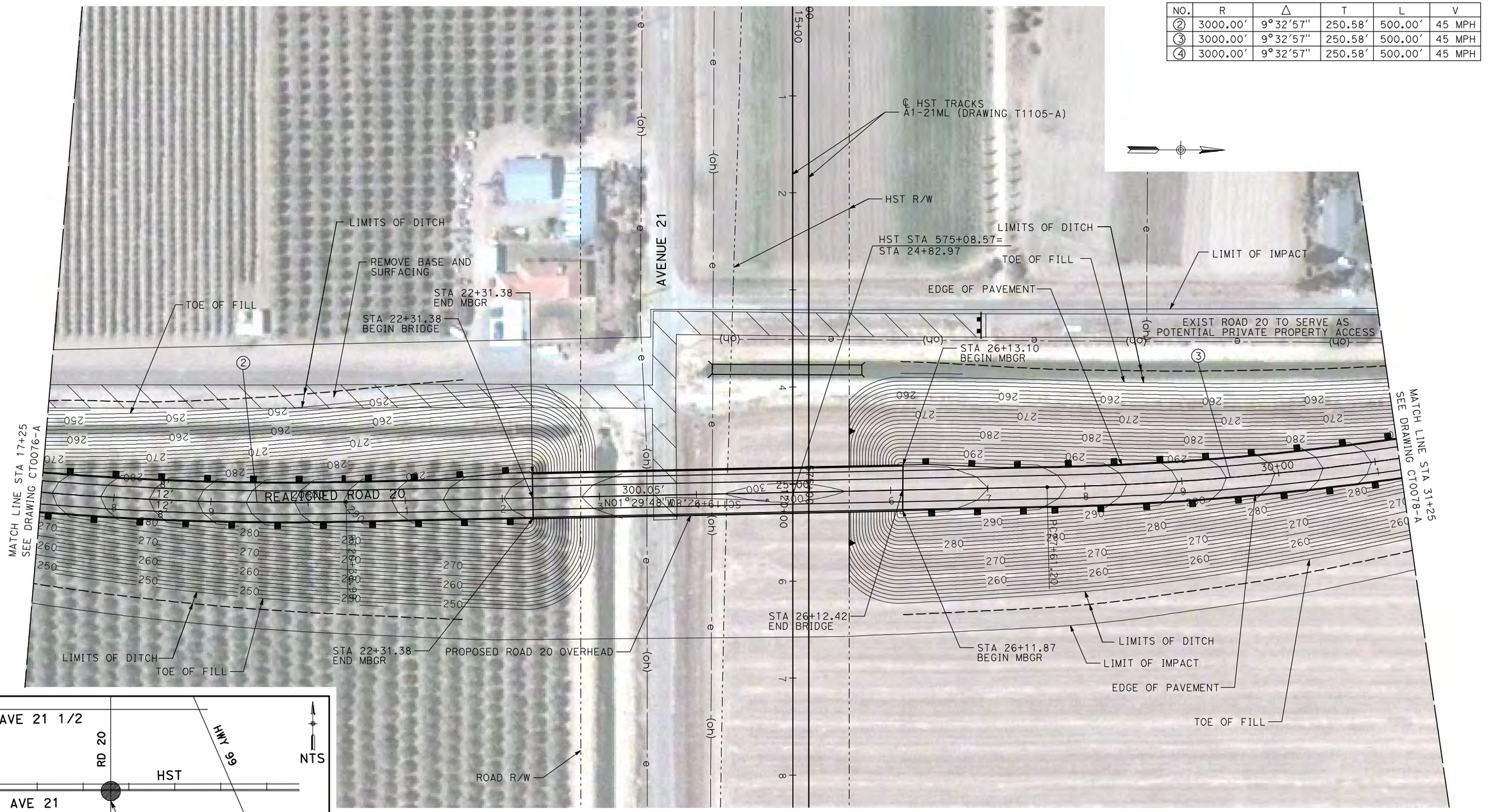

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1072-A THROUGH CT1074-A.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 20
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0077-A
SCALE AS SHOWN
SHEET NO. ### OF ###

GibsonR1 6/28/2011 4:31:19 PM i:\chsr\60022962\task-02_merced-fresno\cadd\civil\Sheet\ROADWAY\Hybrid-Ave21\Volume 1 - Ave21Hybrid Grade Separation\Layout\Common with Ave 21\MF-CT-0077-A.dgn

CURVE DATA

NO.	R	Δ	T	L	V
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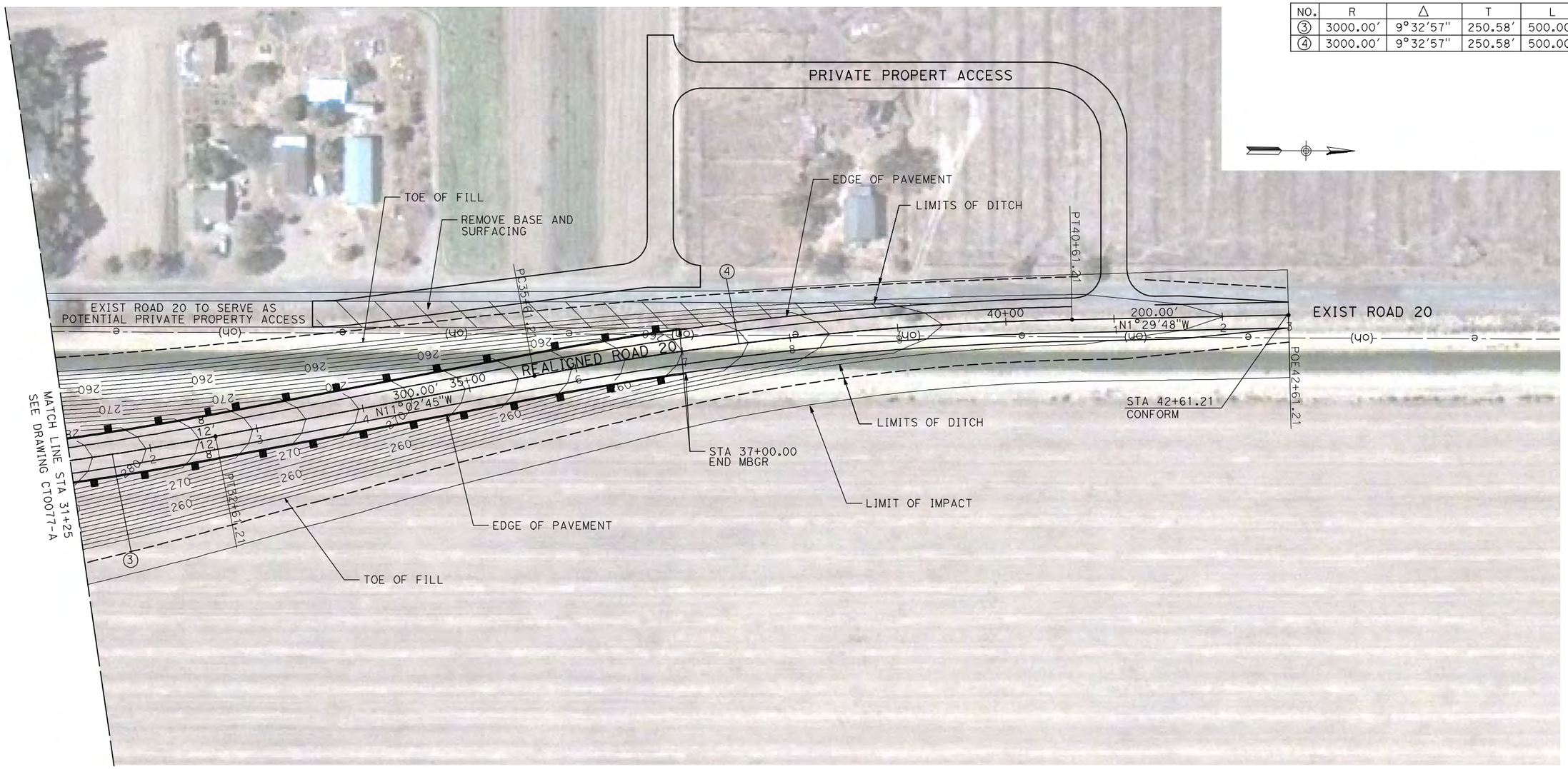

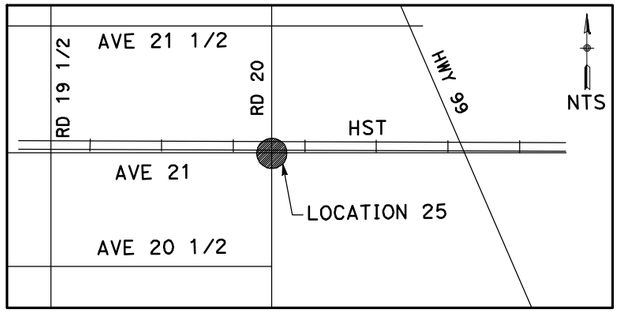

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1072-A THROUGH CT1074-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 20
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT0078-A
SCALE AS SHOWN
SHEET NO. ### OF ###

GibsonR1 6/28/2011 4:31:28 PM I:\chsr\60022962\task-02_merced-fresno\cadd\civil\Sheet\ROADWAY\Hybrid-Ave21\Volume 1 - Ave21Hybrid Grade Separation\Layout\Common with Ave 21\MF-CT-0078-A.dgn

CURVE DATA

NO.	R	Δ	T	L	V
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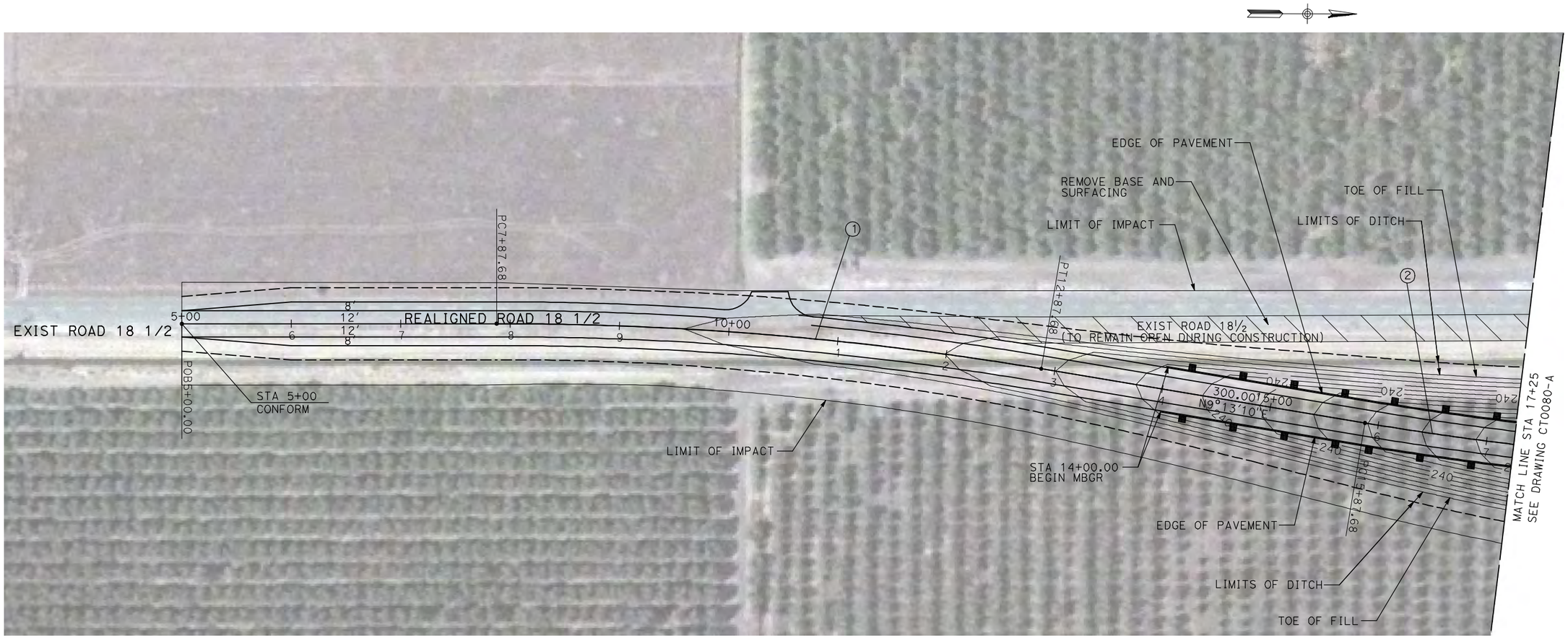

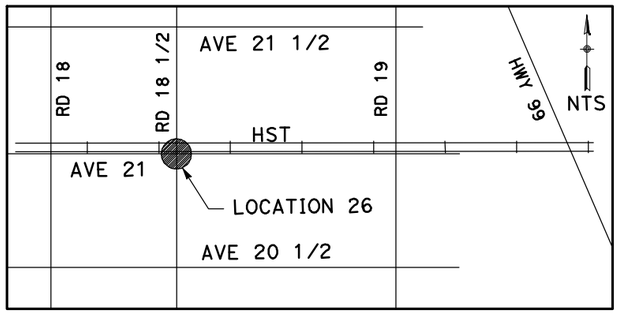

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1075-A THROUGH CT1077-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 18 1/2
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0079-A
SCALE AS SHOWN
SHEET NO. ### OF ###

GibsonR1 6/28/2011 4:31:34 PM i:\chsr\6002962\task-02_merced-fresno\cadd\civil\Sheet\ROADWAY\Hybrid-Ave21\Volume 1 - Ave21Hybrid Grade Separation\Layout\Common with Ave 21\MF-CT-0079-A.dgn

CURVE DATA

NO.	R	Δ	T	L	V
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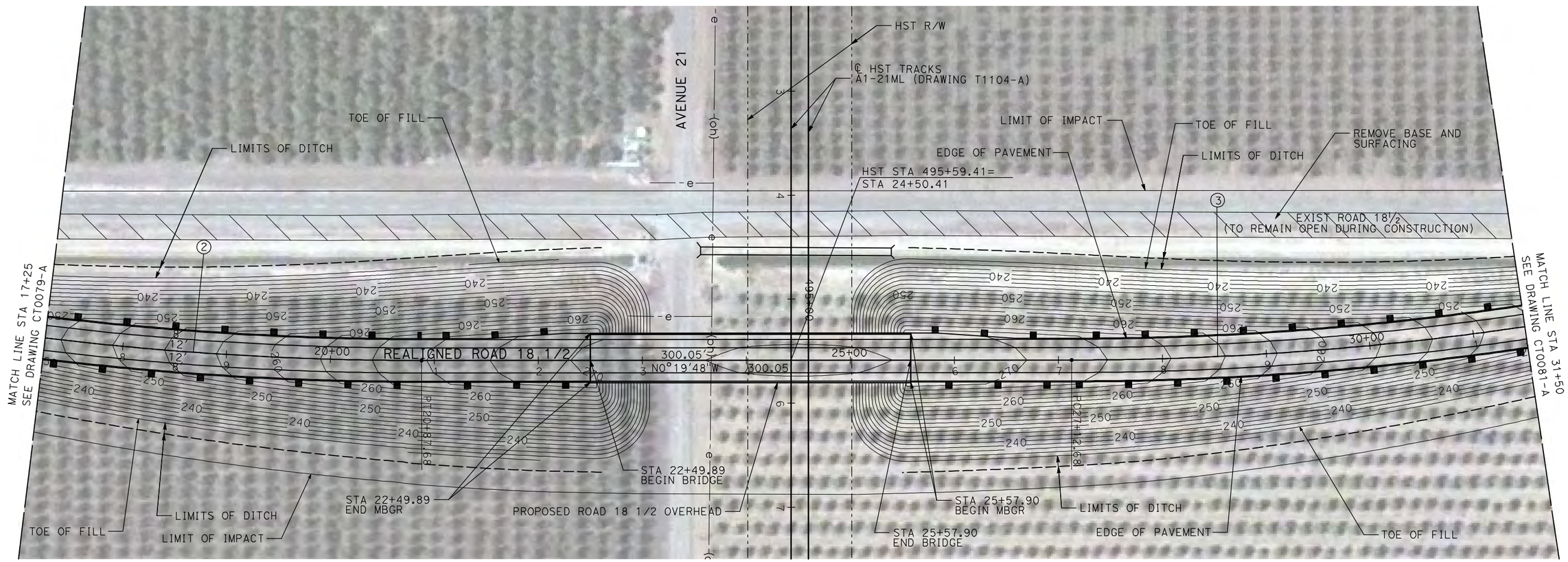
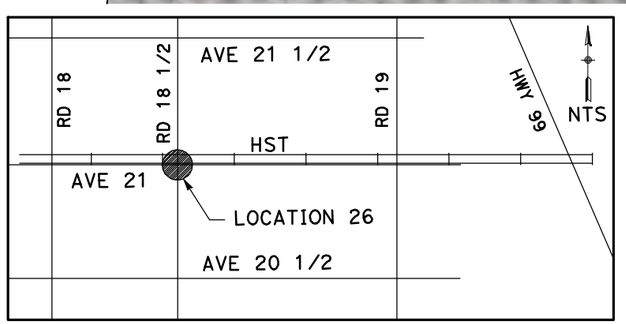
3	3000.00′	9°32′57″	250.58′	500.00′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1075-A THROUGH CT1077-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

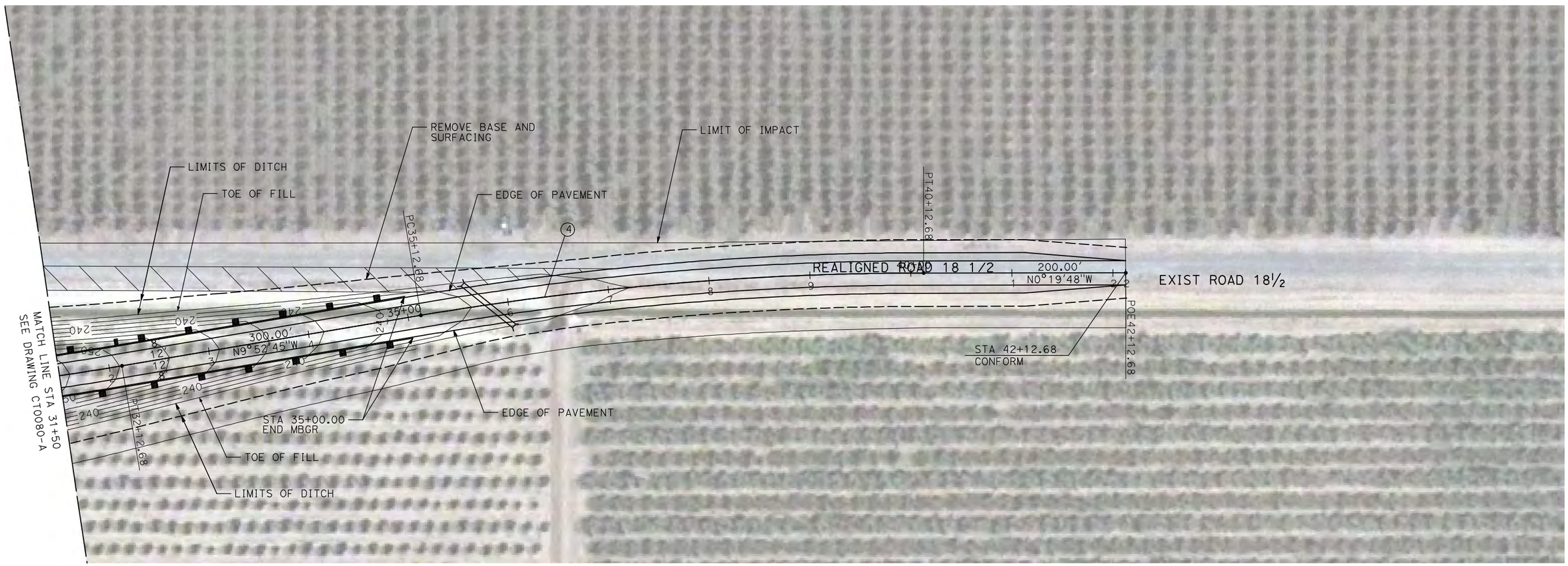
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 18 1/2
LAYOUT
SHEET 2 OF 3

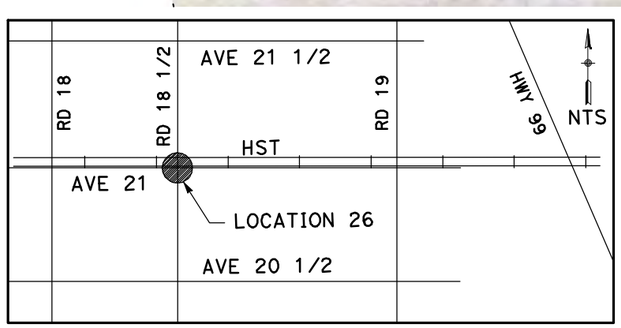
CONTRACT NO. HSR06-007
DRAWING NO. CT0080-A
SCALE AS SHOWN
SHEET NO. ### OF ###

GibsonR1 6/28/2011 4:31:40 PM I:\chsr\60022962\task-02_merced-fresno\cadd\civil\Sheet\ROADWAY\Hybrid-Ave21\Volume 1 - Ave21Hybrid Grade Separation\Layout\Common with Ave 21\MF-CT-0080-A.dgn

CURVE DATA

NO.	R	Δ	T	L	V
4	3000.00′	9°32′57″	250.58′	500.00′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1075-A THROUGH CT1077-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 18 1/2
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0081-A
SCALE AS SHOWN
SHEET NO. ### OF ###

6/28/2011 4:31:49 PM I:\chsr\60022962\task-02_merced-fresno\cadd\civil\Sheet\ROADWAY\Hybrid-Ave21\Volume 1 - Ave21Hybrid Grade Separation\Layout\Common with Ave 21\MF-CT-0081-A.dgn
GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
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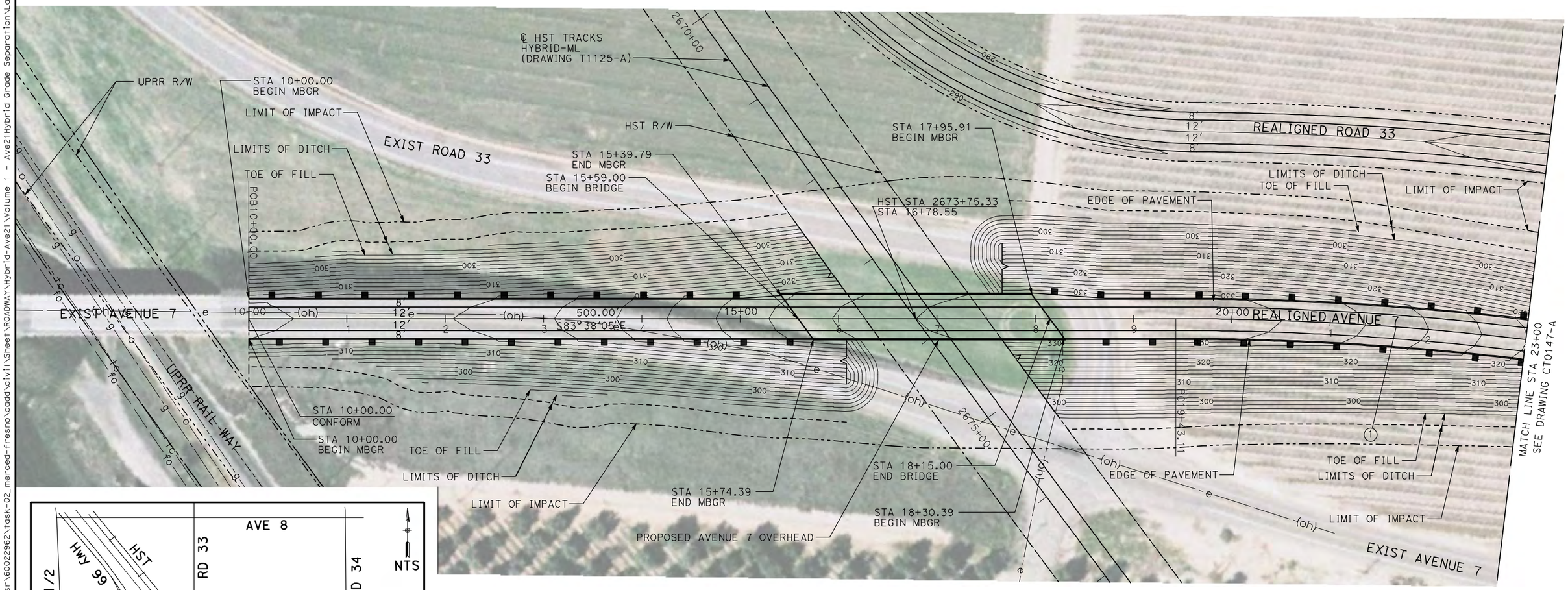

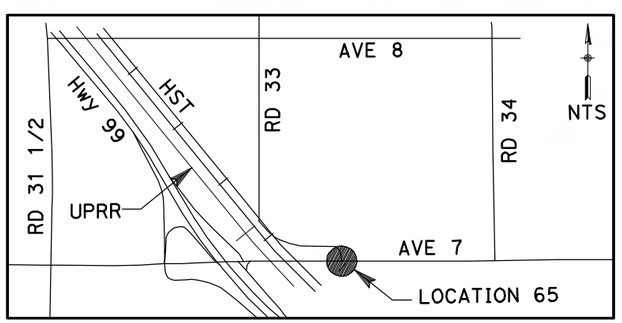

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1146-A THROUGH CT1148-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 7
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0146-A
SCALE AS SHOWN
SHEET NO. OF ###

GibsonR1 6/28/2011 4:31:56 PM i:\chsr\60022962\task-02_merced-fresno\cadd\civil\Sheet\ROADWAY\Hybrid-Ave21\Volume 1 - Ave21Hybrid Grade Separation\Layout\Common with Ave 21\MF-CT-0146-A.dgn

CURVE DATA

NO.	R	Δ	T	L	V
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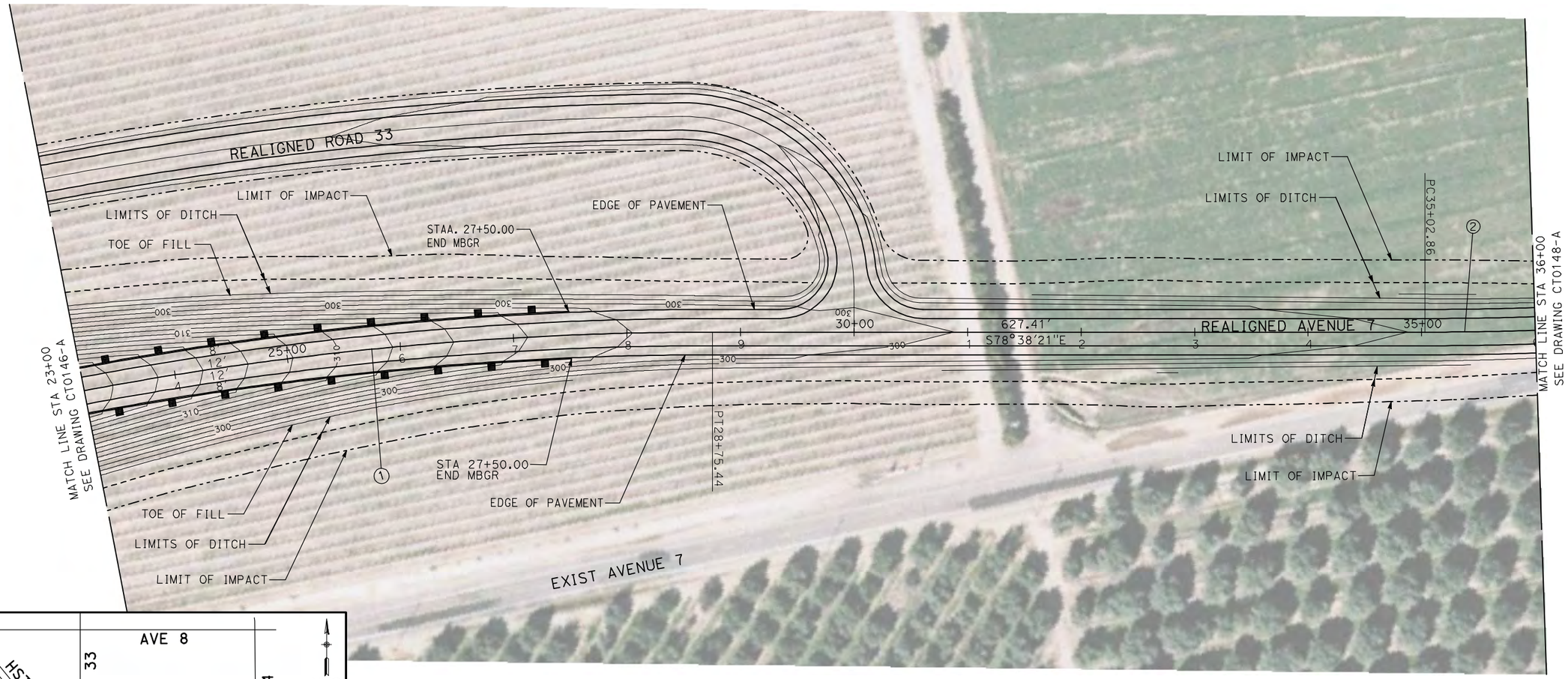
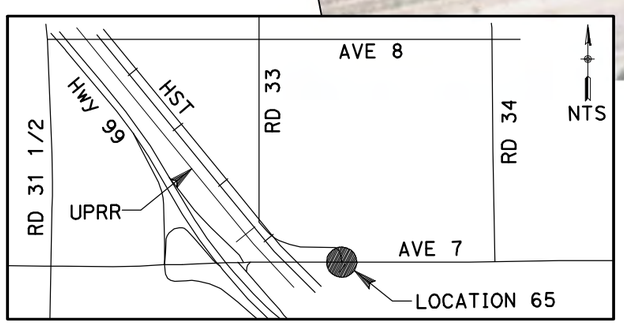
2	3000.00′	12°10′29"	319.93′	637.46′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1146-A THROUGH CT1148-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 7
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0147-A
SCALE AS SHOWN
SHEET NO. OF ###

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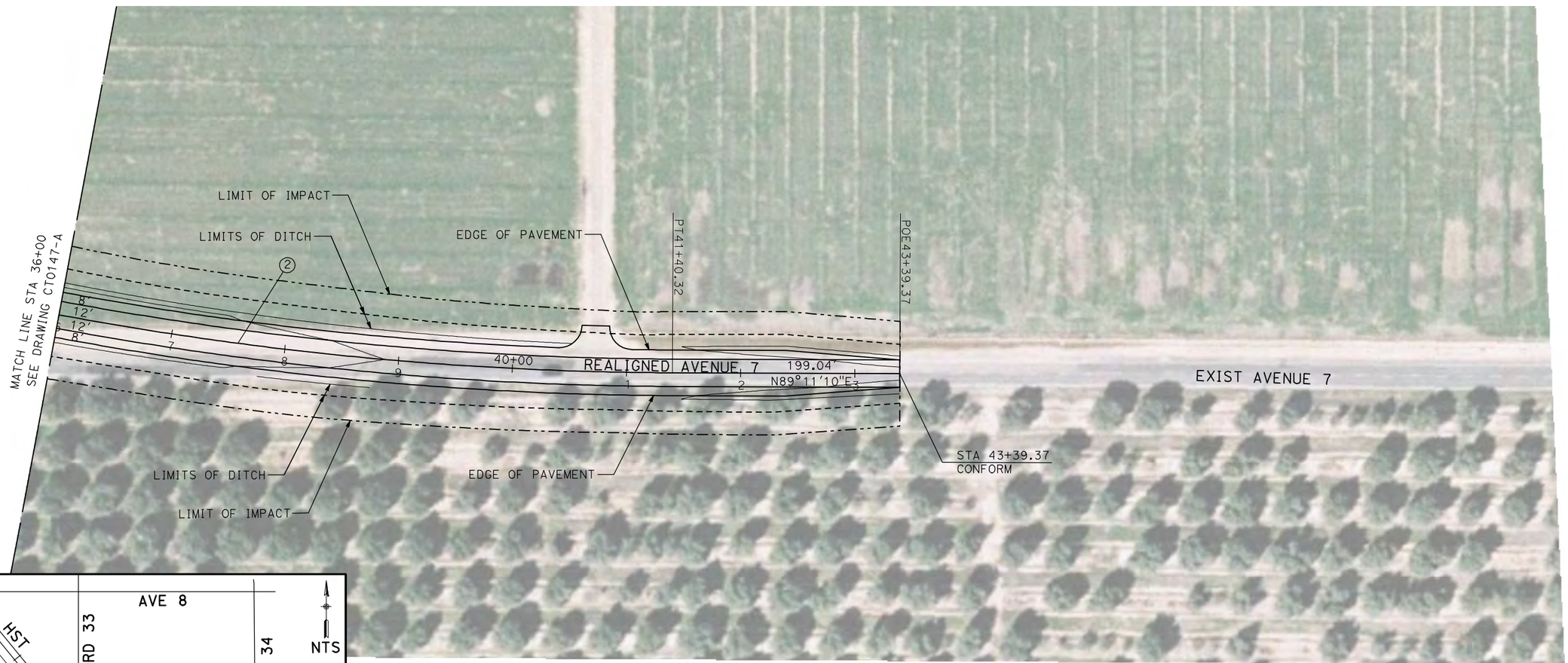
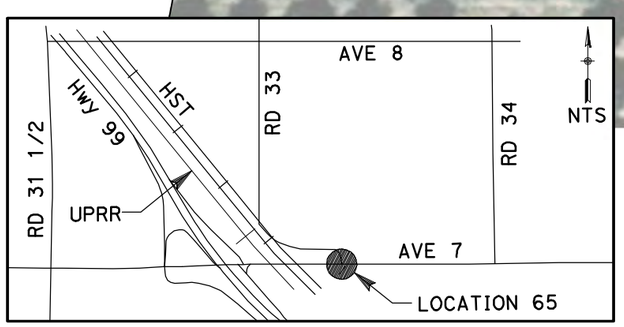
GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
②	5000.00′	6°52′32"	300.36′	600.00′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1146-A THROUGH CT1148-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 7
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0148-A
SCALE AS SHOWN
SHEET NO. OF ###

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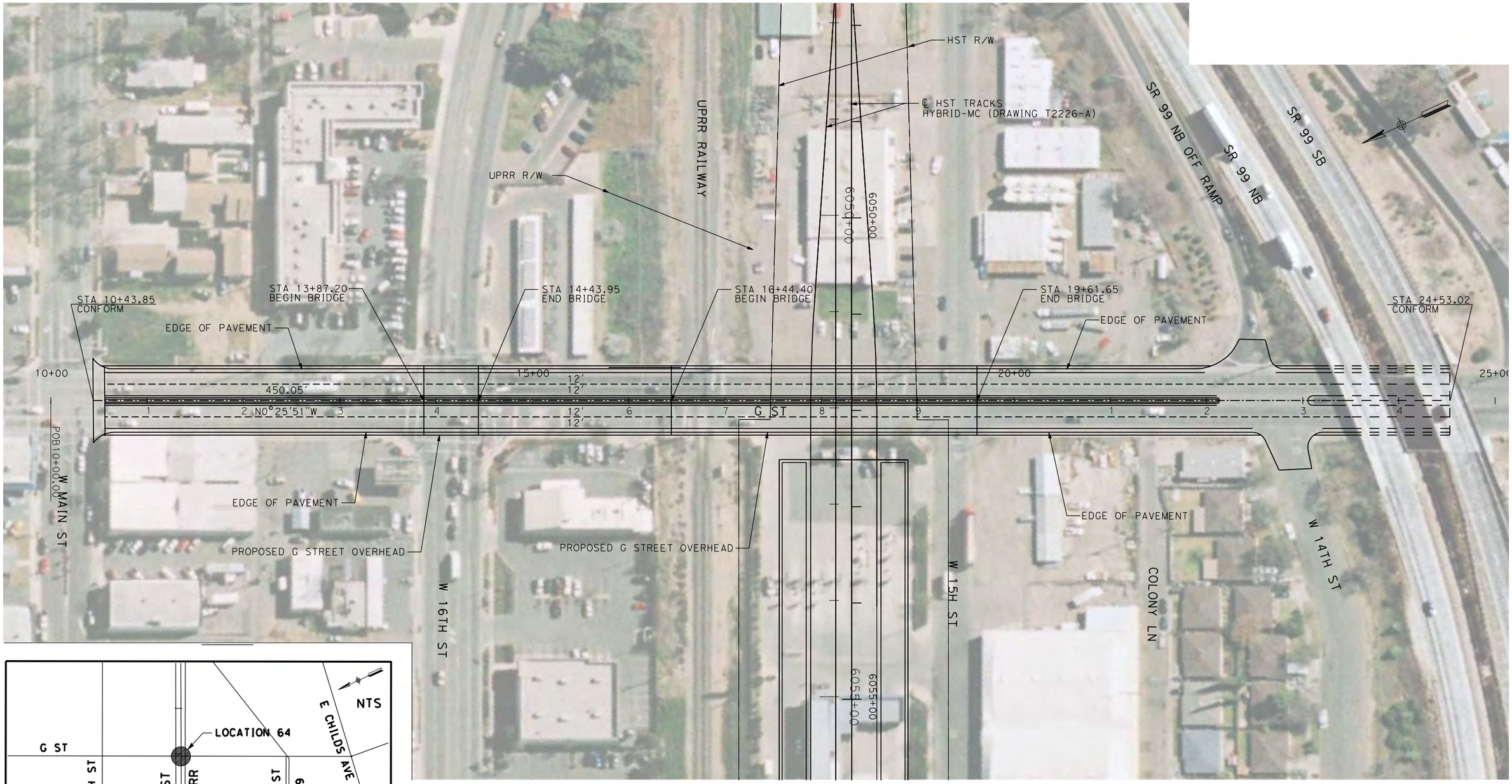


NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWING CT1149-A.

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

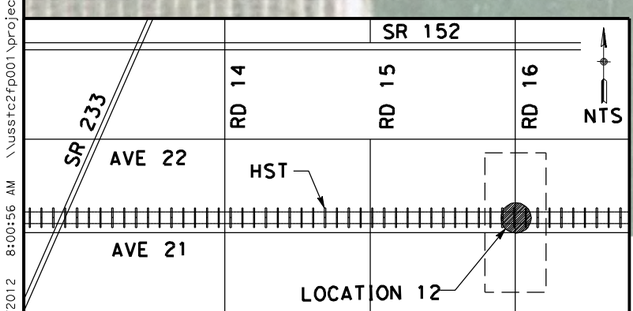
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

BNSF MERCED CONNECTOR - AVE 21 HYBRID
GRADE SEPARATION - G STREET
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HST06-007
DRAWING NO. CT0149-A
SCALE AS SHOWN
SHEET NO. ### OF ###

GibsonR1 1/11/2012 4:18:03 PM i:\chsr\60022962\task-03_merced-fresno\cadd\civil\design\gibsonr\rev 1 - 15% plans\cadd\sheet\plans\a1\MF-CT-0149-A_REV1.dgn



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6000-B THROUGH CT6003-B

CURVE DATA

No.	R	Δ	T	L	V
1	3000.00	10°4'29"	264.44	527.51	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

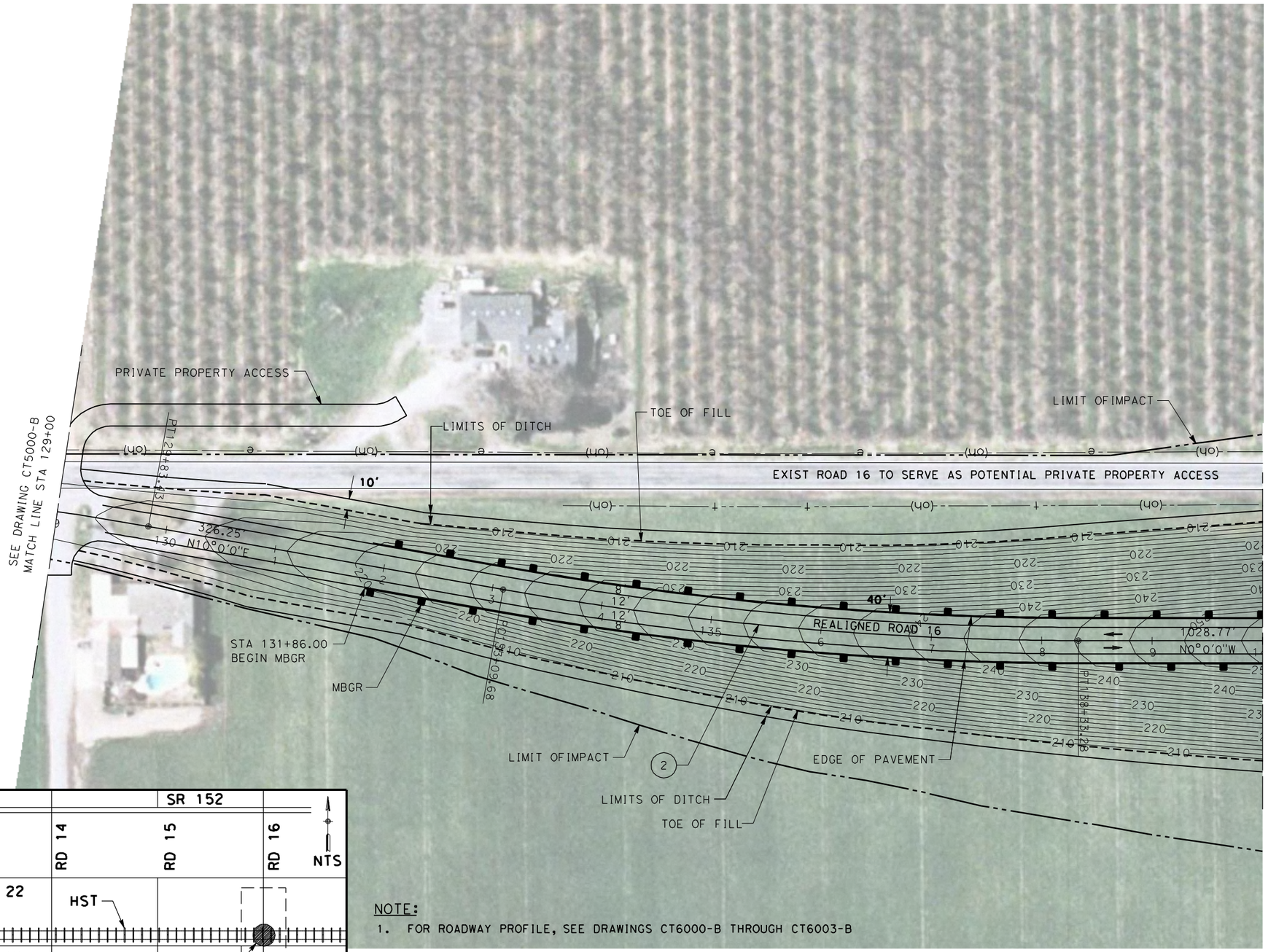
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

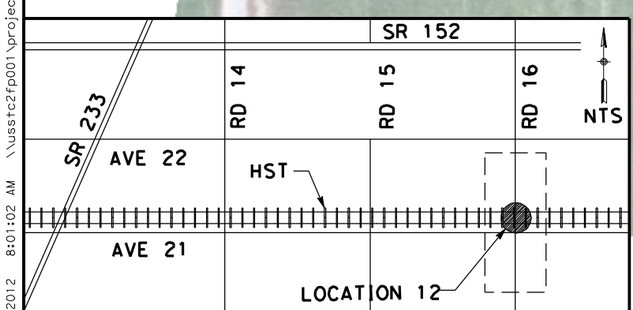
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16
LAYOUT
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5000-B
SCALE AS SHOWN
SHEET NO. ### OF ###

USER=ReyesC1 4/3/2012 8:00:56 AM \\usstc2fp001\projects\60022962\task-03_merced-fresno\cadd\civil\design\santa clara\delosreyesc\15% roadway revisions\vol iii final submittal\roadway\sheet\package 4 -





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6000-B THROUGH CT6003-B

CURVE DATA

No.	R	Δ	T	L	V
2	3000.00	10°0'00"	262.47	523.60	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

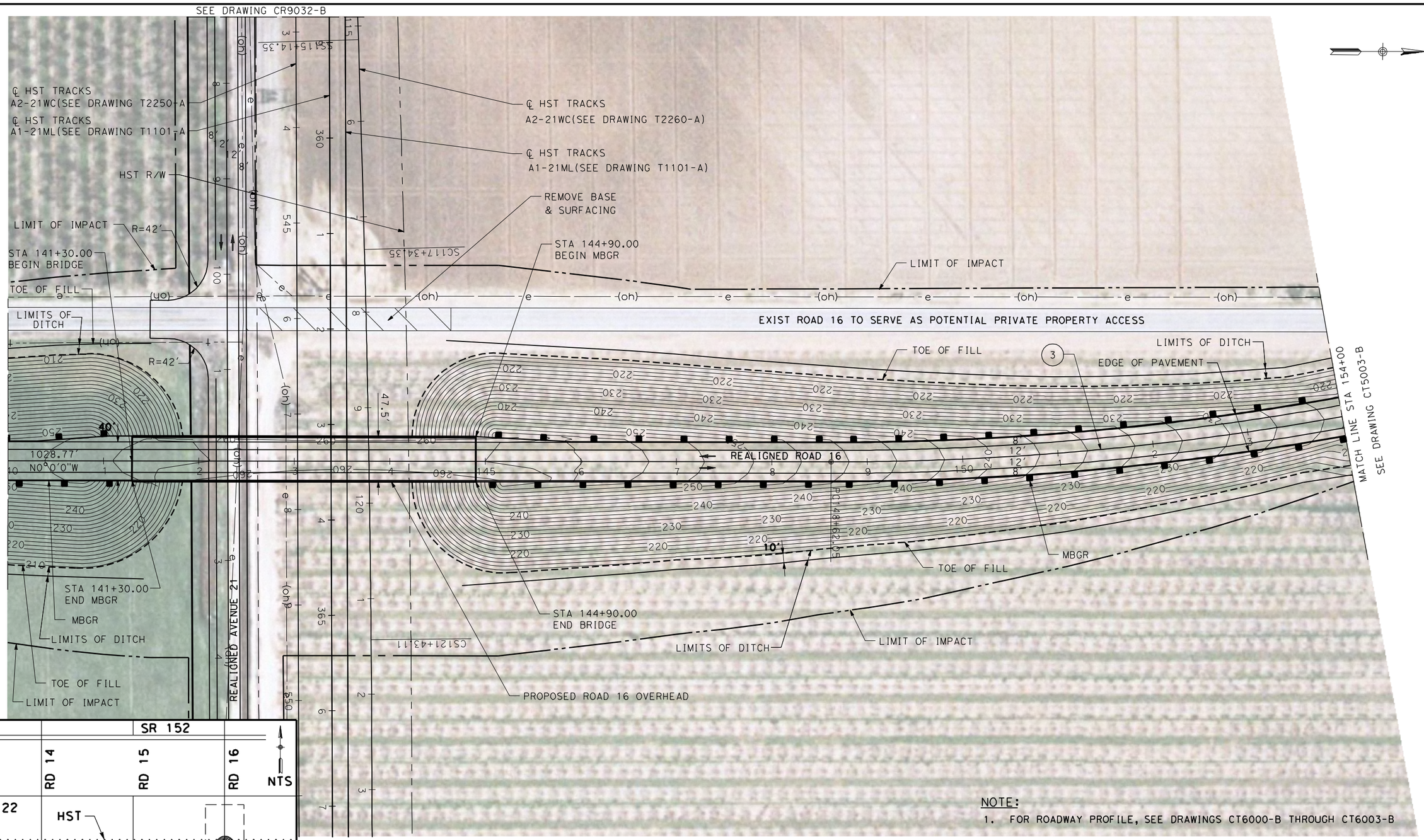
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

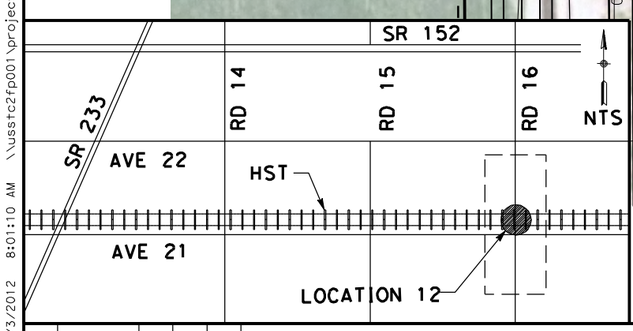
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16
LAYOUT
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5001-B
SCALE AS SHOWN
SHEET NO. ### OF ###

USER=ReyesC1 4/3/2012 8:01:02 AM \\usstc2fp001\projects\60022962\task-03_merced-fresno\cadd\civil\design\santa clara\delosreyesc\15% roadway revisions\vol iii final submittal\roadway\sheet\package 4 -





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6000-B THROUGH CT6003-B

CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	10° 39′57″	280.04	558.46	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

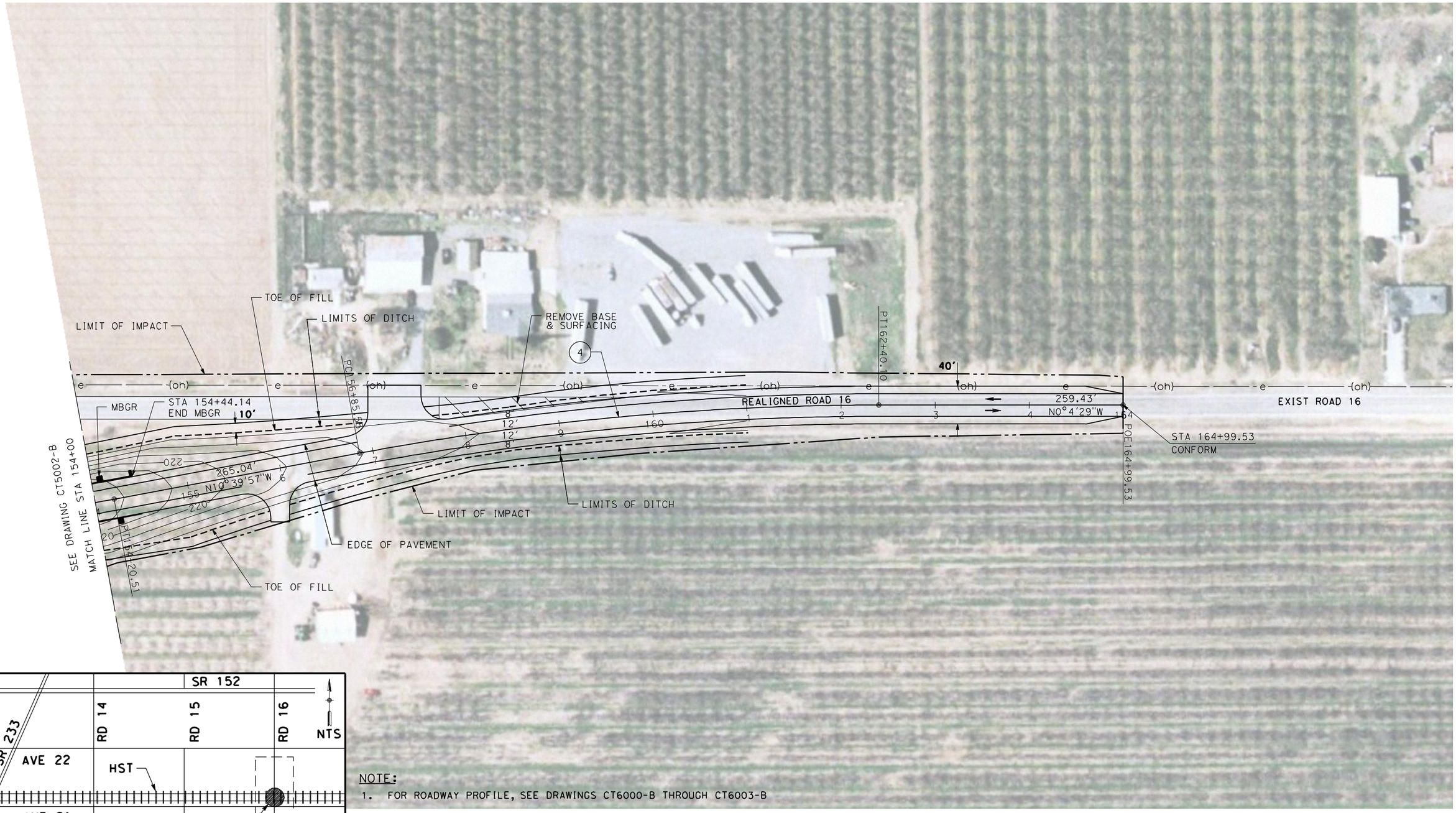
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16
LAYOUT
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5002-B
SCALE AS SHOWN
SHEET NO. ### OF ###

USER=ReyesC1 4/3/2012 8:01:10 AM \\usstc2fp001\projects\60022962\task-03_merced-fresno\cadd\civil\design\santa clara\delosreyesc\15% roadway revisions\vol iii final submittal\roadway\sheet\package 4 -



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6000-B THROUGH CT6003-B

CURVE DATA

No.	R	Δ	T	L	V
4	3000.00	10°35'28"	278.07	554.55	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

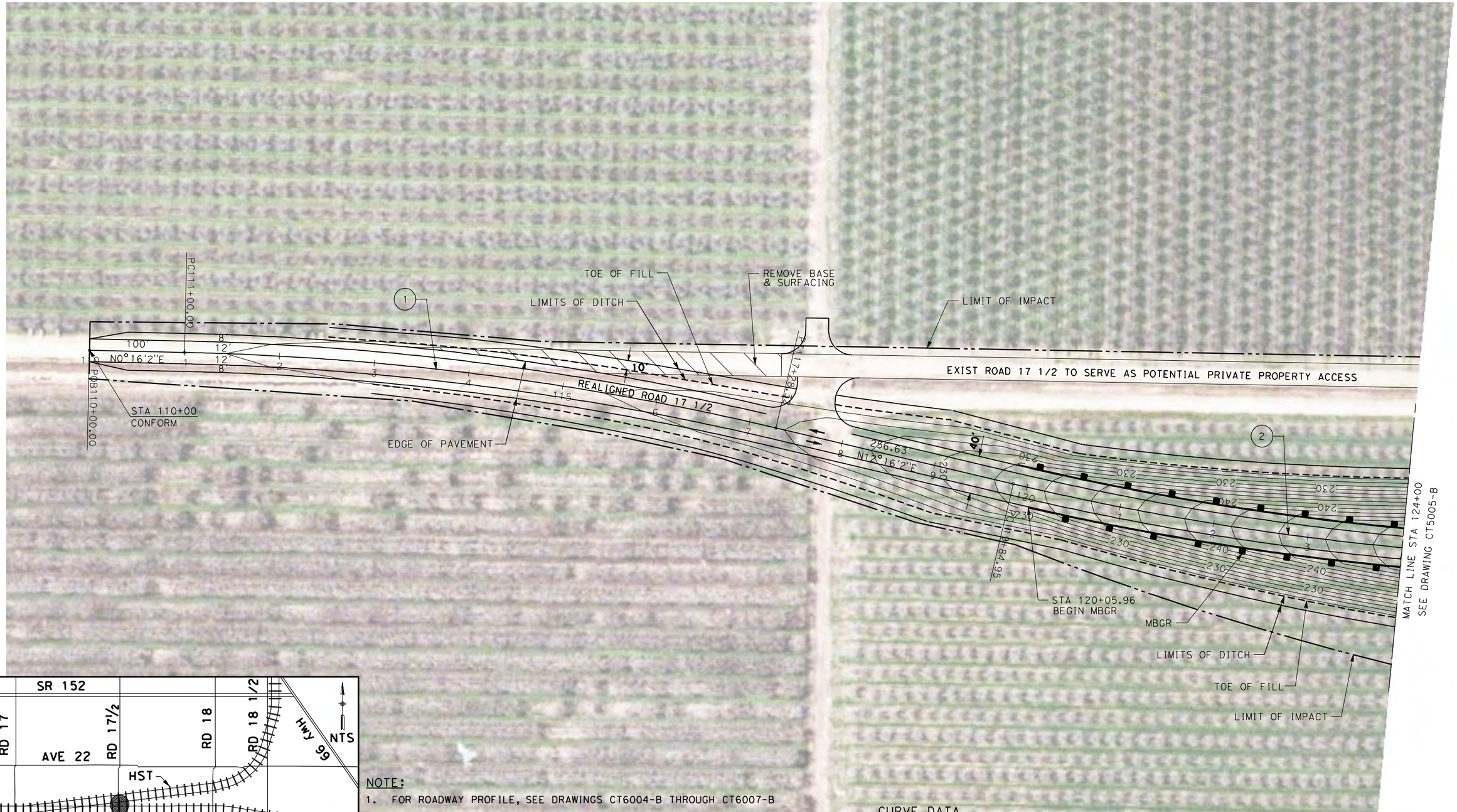
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

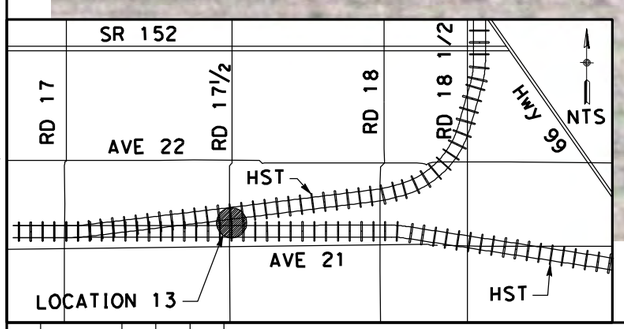
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16
LAYOUT
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5003-B
SCALE AS SHOWN
SHEET NO. ### OF ###

USER=ReyesC1 4/3/2012 8:01:16 AM \\usstc2fp001\projects\60022962\task-03_merced-fresno\cadd\civil\design\santa clara\delosreyesc\15% roadway revisions\vol iii final submittal\roadway\sheet\package 4 -





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6004-B THROUGH CT6007-B

CURVE DATA

No.	R	Δ	T	L	V
1	3000.00	12°00'00"	315.31	628.32	45 MPH
2	3000.00	13°16'23"	349.05	694.97	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 17 1/2
LAYOUT
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5004-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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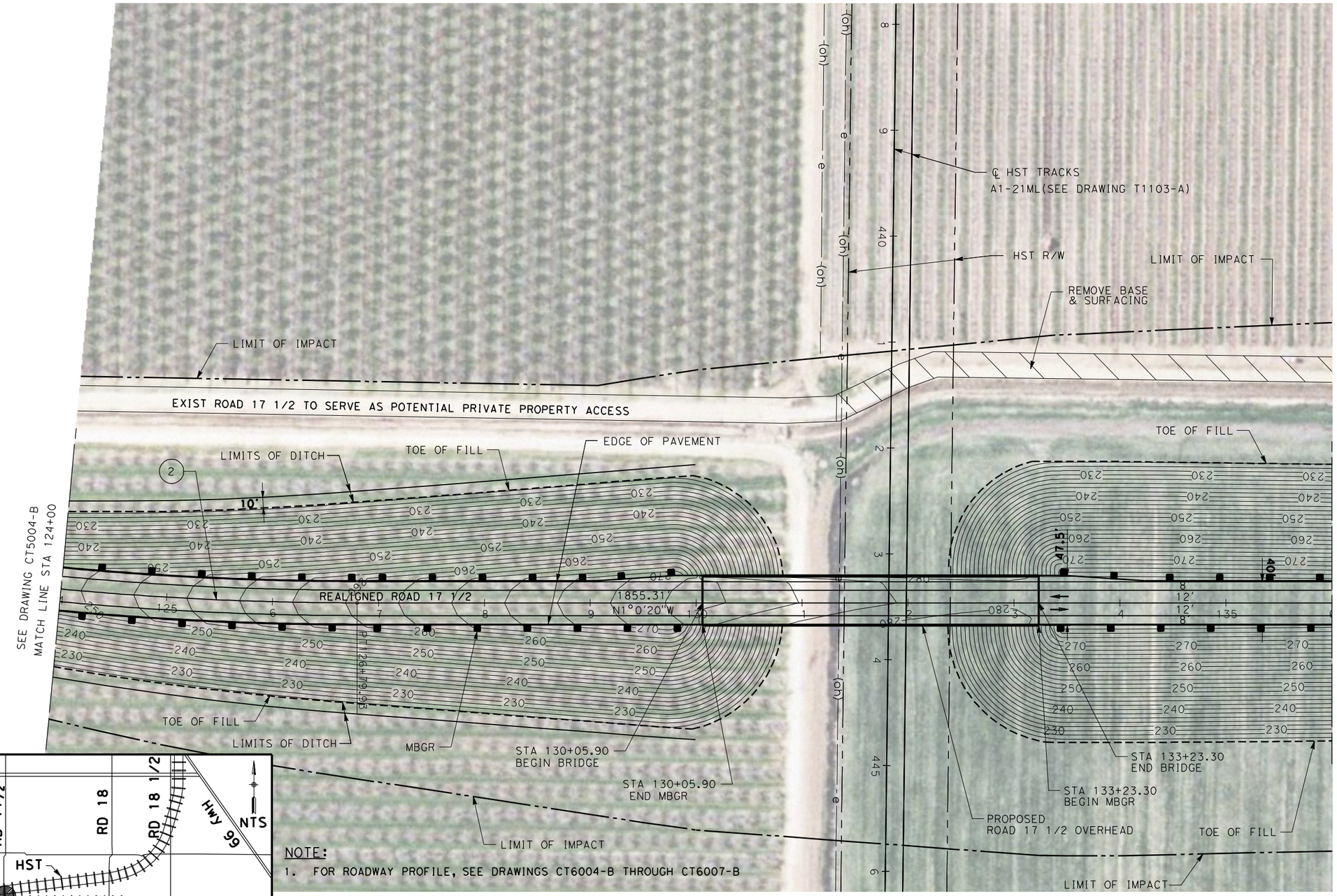

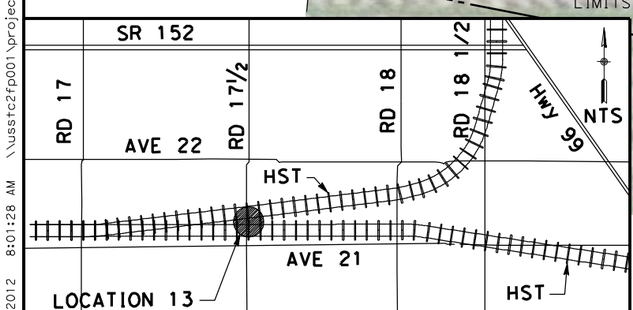

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6004-B THROUGH CT6007-B

CURVE DATA

No.	R	Δ	T	L	V
2	3000.00	13°16'23"	349.05	694.97	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

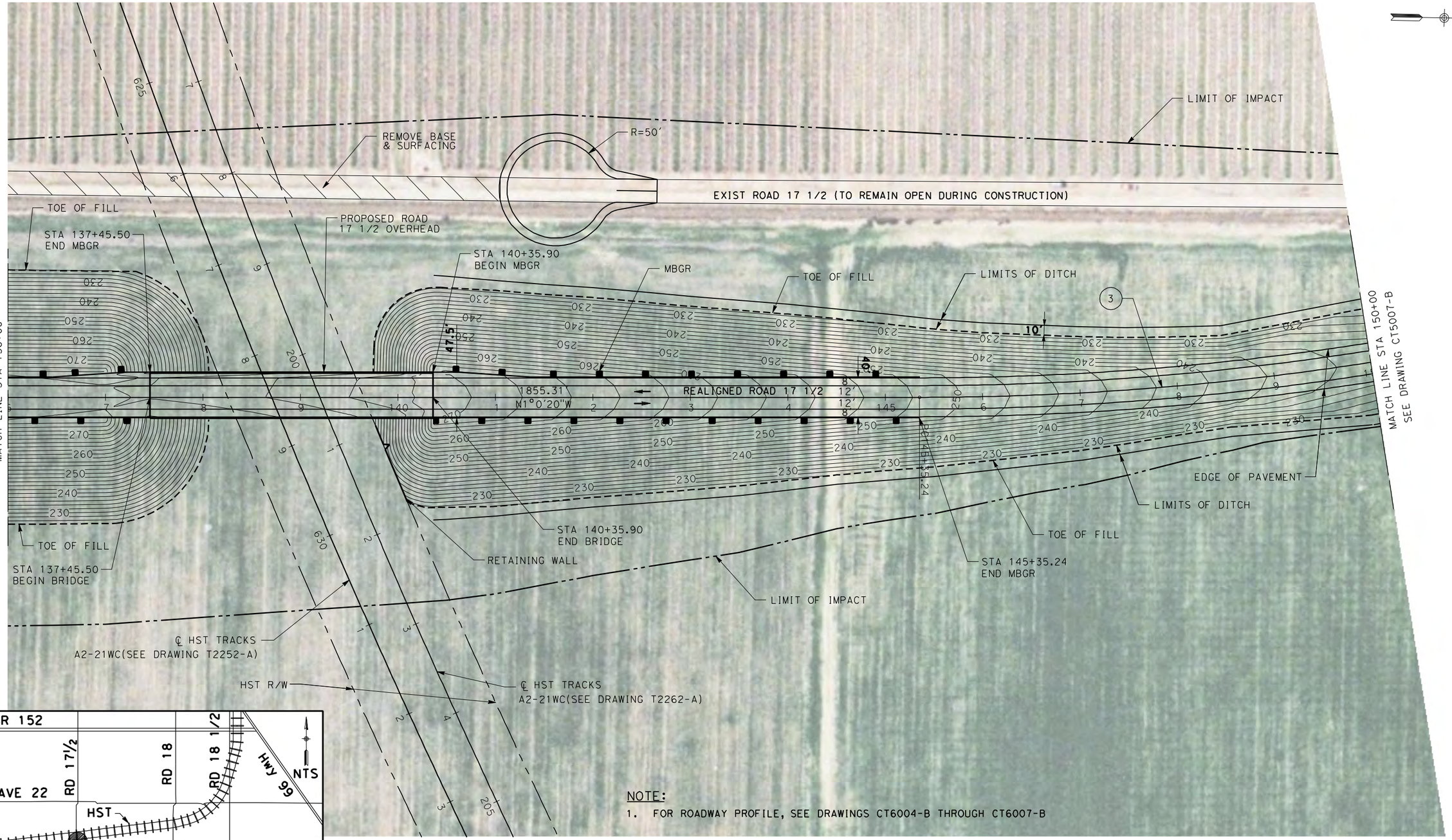
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

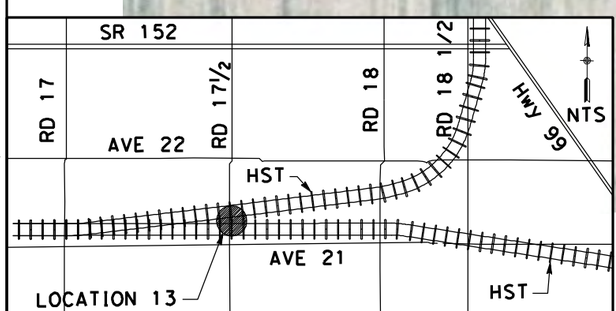
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 17 1/2
LAYOUT
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5005-B
SCALE AS SHOWN
SHEET NO. ### OF ###

USER=ReyesC1 4/3/2012 8:01:28 AM \\usstc2fp001\projects\60022962\task-03_merced-fresno\cadd\civil\design\santa clara\delosreyesc\15% roadway revisions\vol iii final submittal\roadway\sheet\package 4 -





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6004-B THROUGH CT6007-B

CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	09°59'40"	262.32	523.30	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 17 1/2
LAYOUT
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5006-B
SCALE AS SHOWN
SHEET NO. ### OF ###

6/27/2011 1:59:20 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 4 - ave 21 hybrid\Volume 1B - Ave 21 Hybrid Grade Separation\Layout\CT5006-B.dgn
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NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6004-B THROUGH CT6007-B

CURVE DATA

No.	R	Δ	T	L	V
4	3000.00	11°00'00"	288.87	575.96	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 17 1/2
LAYOUT
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5007-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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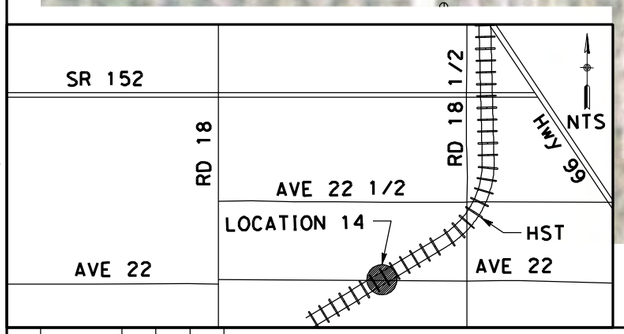
ayelled



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6016-B THROUGH CT6018-B

CURVE DATA

No.	R	Δ	T	L	V
1	3000.00	11°13'17"	294.72	587.55	45 MPH
2	3000.00	11°01'05"	289.34	576.90	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

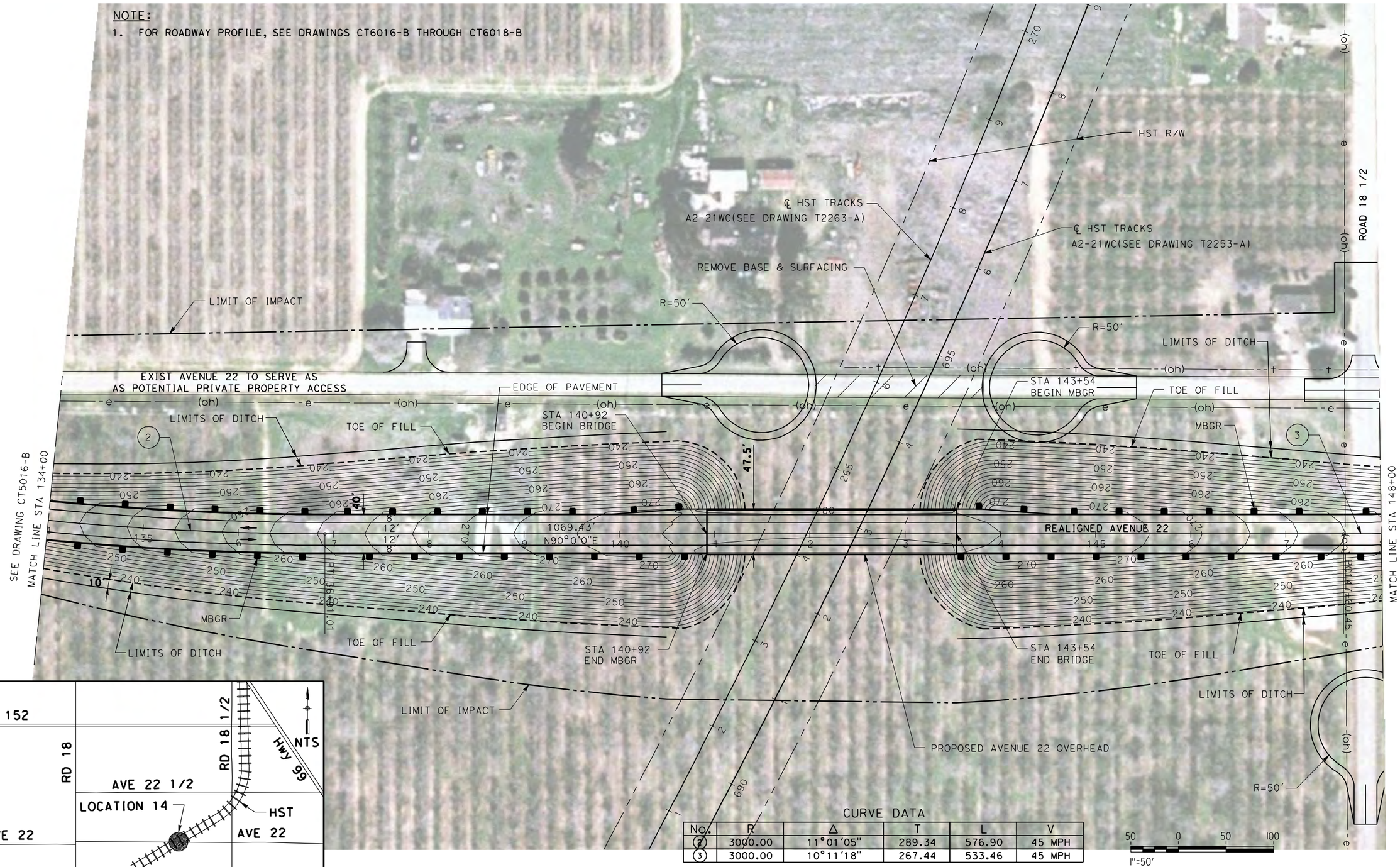
UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 22
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT5016-B
SCALE AS SHOWN
SHEET NO. ### OF ###

6/27/2011 1:59:39 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 4 - ave 21 hybrid\Volume 1B - Ave 21 Hybrid Grade Separation\Layout\CT5016-B.dgn
ayelled

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6016-B THROUGH CT6018-B



CURVE DATA

No.	R	Δ	T	L	V
2	3000.00	11°01'05"	289.34	576.90	45 MPH
3	3000.00	10°11'18"	267.44	533.46	45 MPH

50 0 50 100

1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 22
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT5017-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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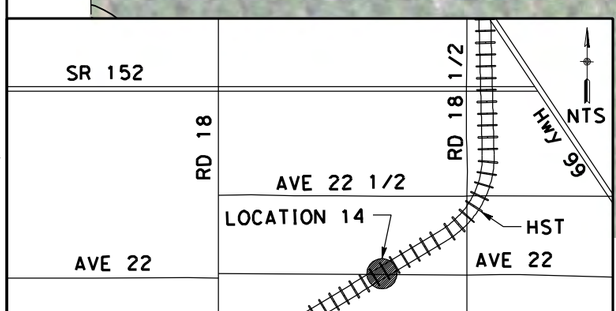
ayeled



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6016-B THROUGH CT6018-B

CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	10°11'18"	267.44	533.46	45 MPH
4	3000.00	10°11'18"	267.44	533.46	45 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
CH2MHILL

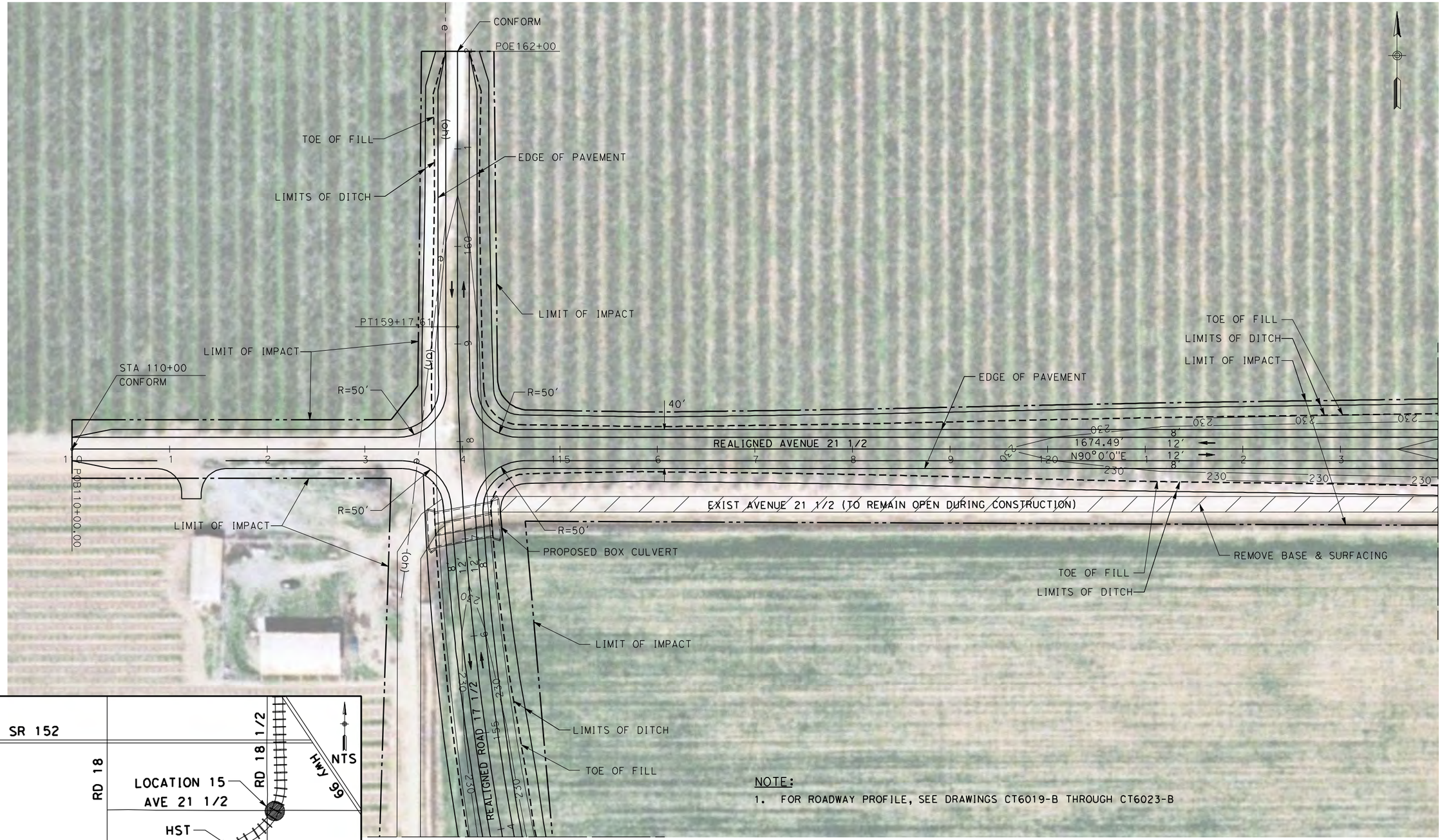
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 22
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT5018-B
SCALE AS SHOWN
SHEET NO. ### OF ###

6/27/2011 2:00:01 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 4 - ave 21 hybrid\Volume 1B - Ave 21 Hybrid Grade Separation\Layout\CT5018-B.dgn
ayelea



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6019-B THROUGH CT6023-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 21 1/2
LAYOUT
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5019-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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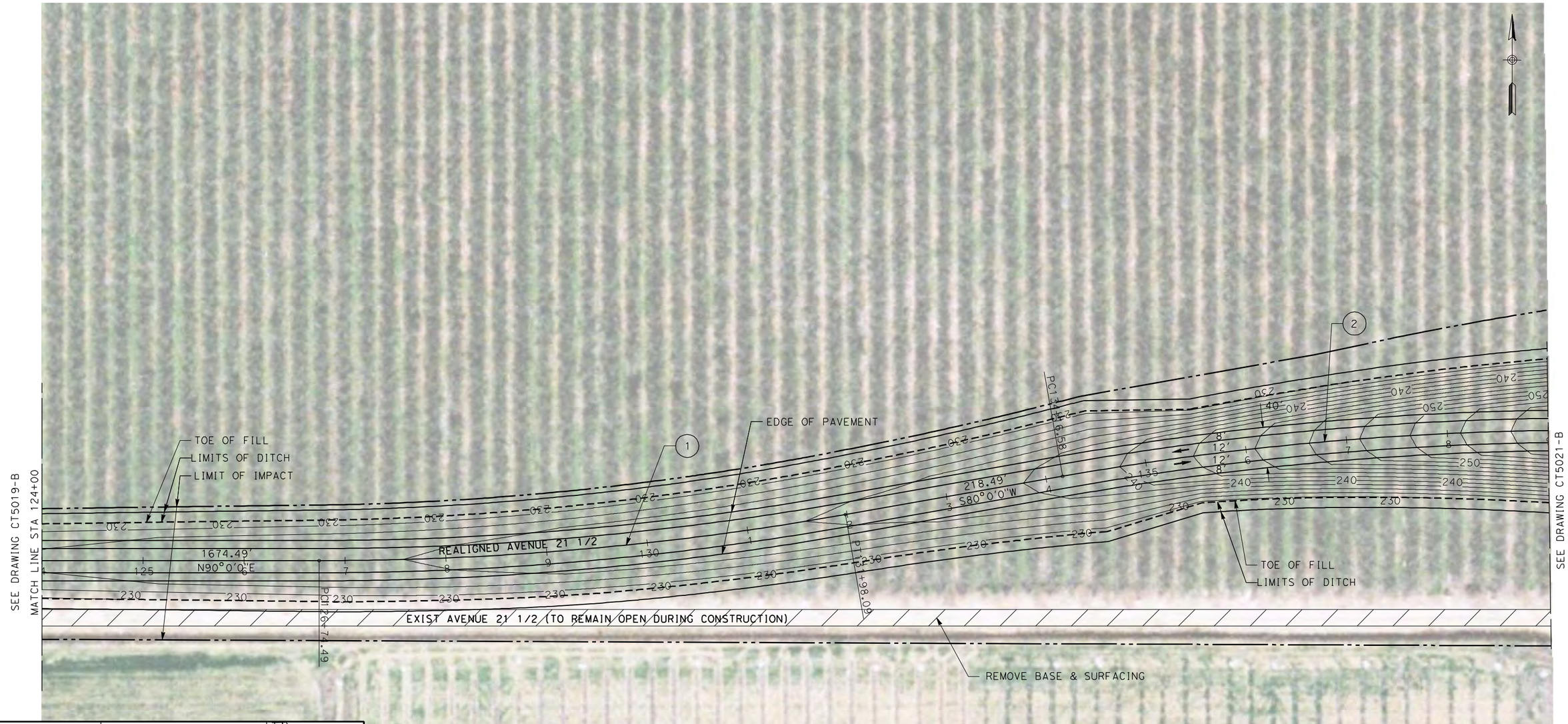
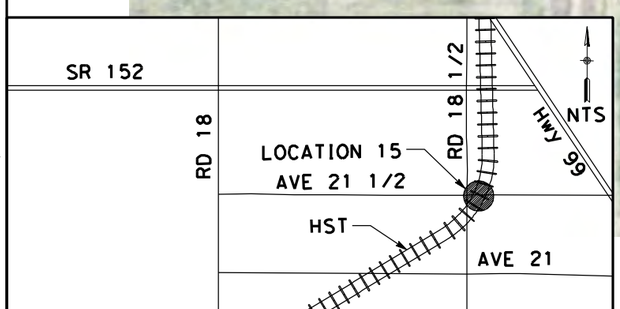
ayeled

p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 4 - ave 21 hybrid\Volume 1B - Ave 21 Hybrid Grade Separation\Layout\CT5020-B.dgn 6/27/2011 2:00:19 PM





CURVE DATA

No.	R	Δ	T	L	V
1	3000.00	80°0'0"	262.47	523.60	45 MPH
2	3000.00	80°0'0"	262.47	523.60	45 MPH

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6019-B THROUGH CT6023-B

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 21 1/2
LAYOUT
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5020-B
SCALE AS SHOWN
SHEET NO. ### OF ###

oyeled

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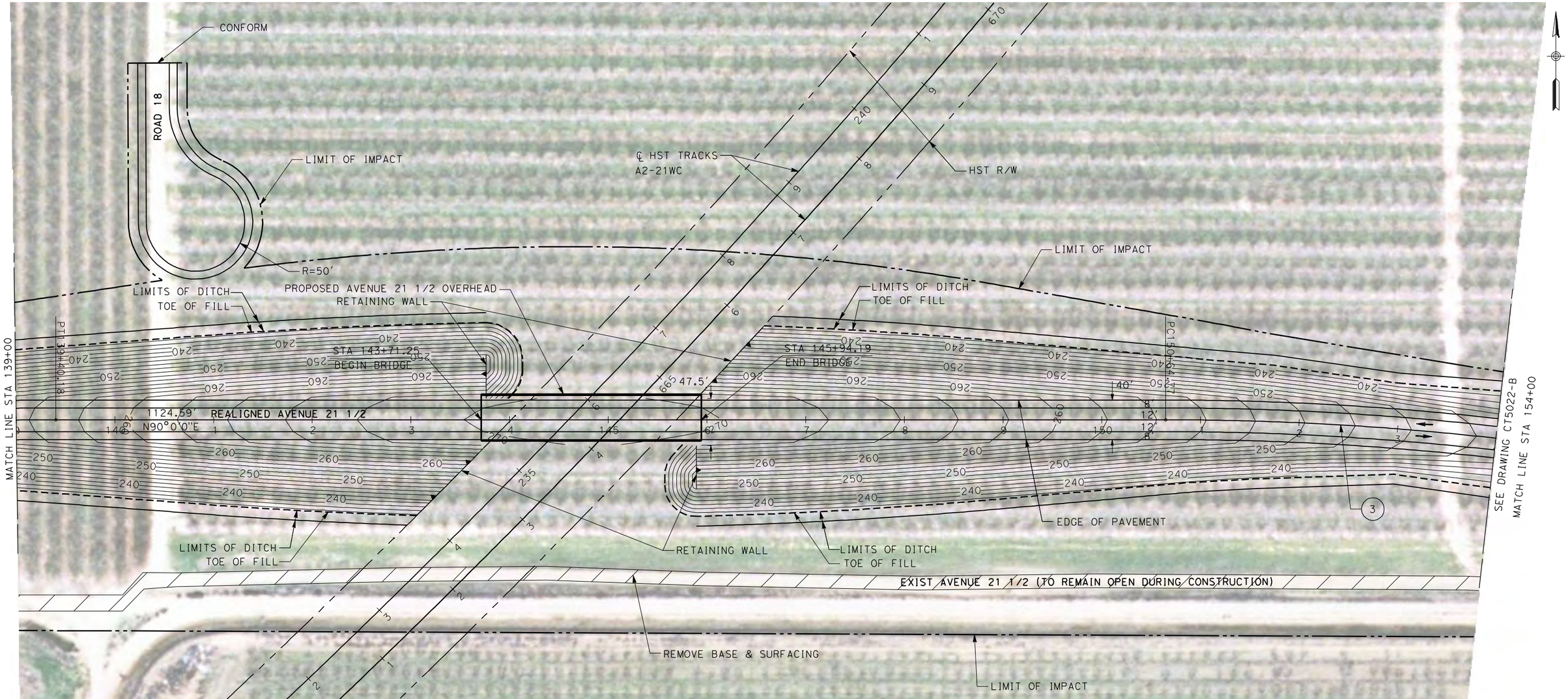

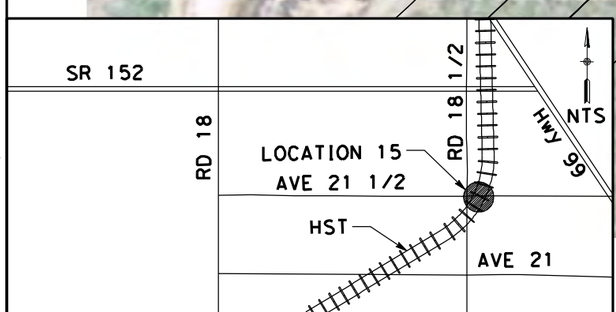

CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	78°51'18"	292.70	583.54	45 MPH

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6019-B THROUGH CT6023-B

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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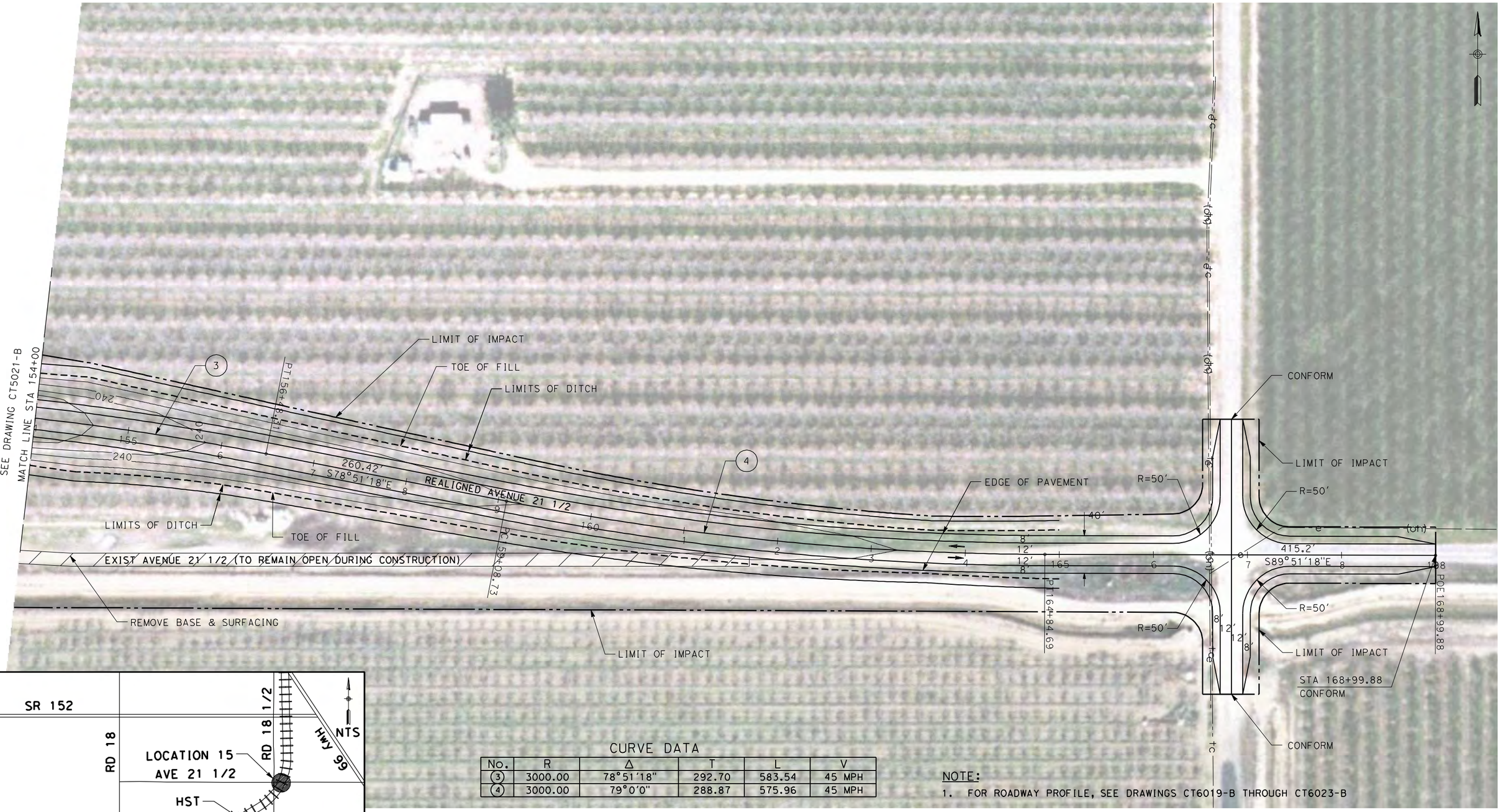
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 21 1/2
LAYOUT
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5021-B
SCALE AS SHOWN
SHEET NO. ### OF ###

ayelled



CURVE DATA

No.	R	Δ	T	L	V
3	3000.00	78°51'18"	292.70	583.54	45 MPH
4	3000.00	79°0'0"	288.87	575.96	45 MPH

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6019-B THROUGH CT6023-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 21 1/2
LAYOUT
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5022-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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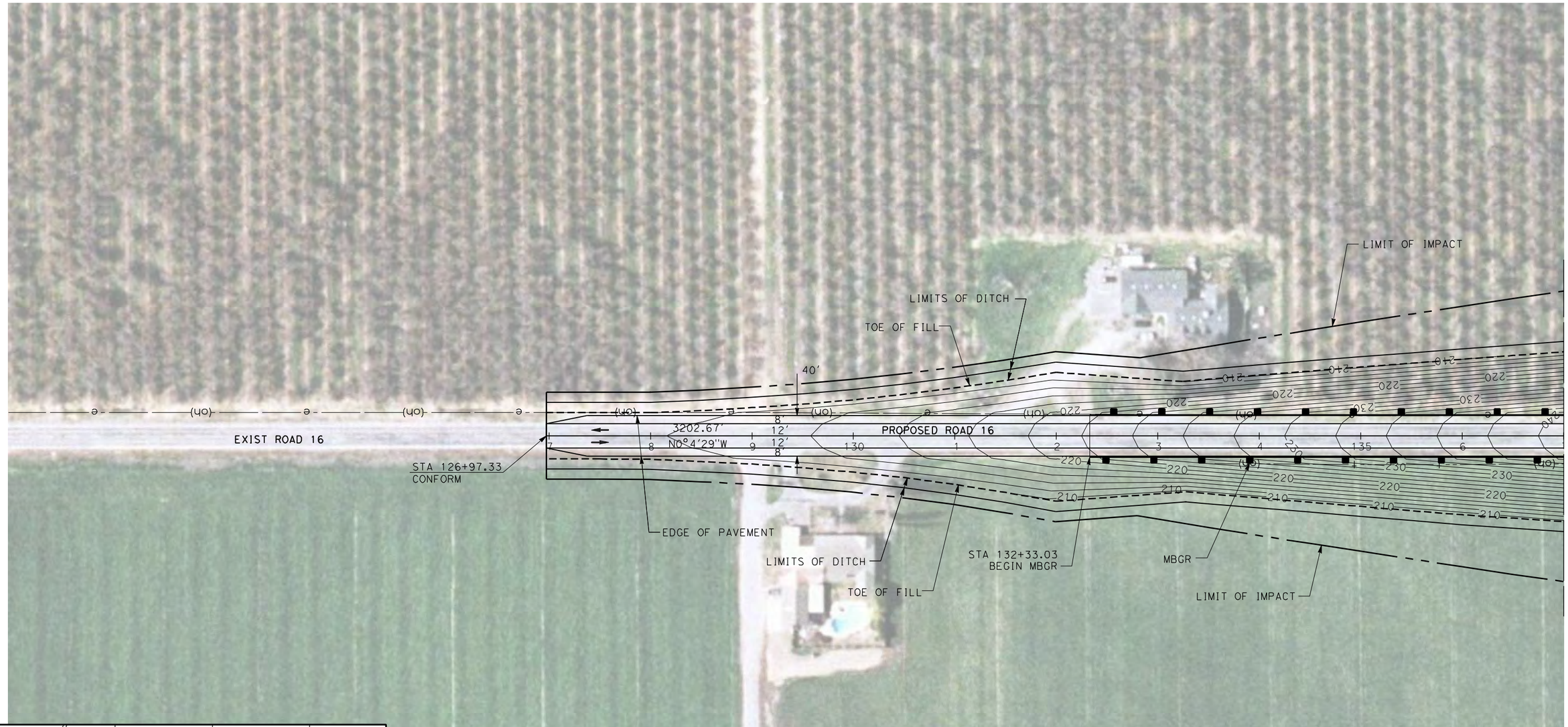

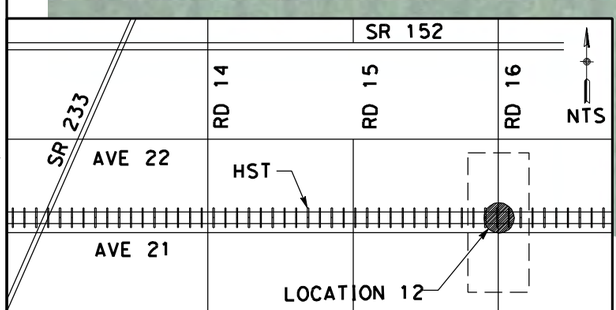

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6024-B THROUGH CT6026-B

50 0 50 100

1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT5023-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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ayelled

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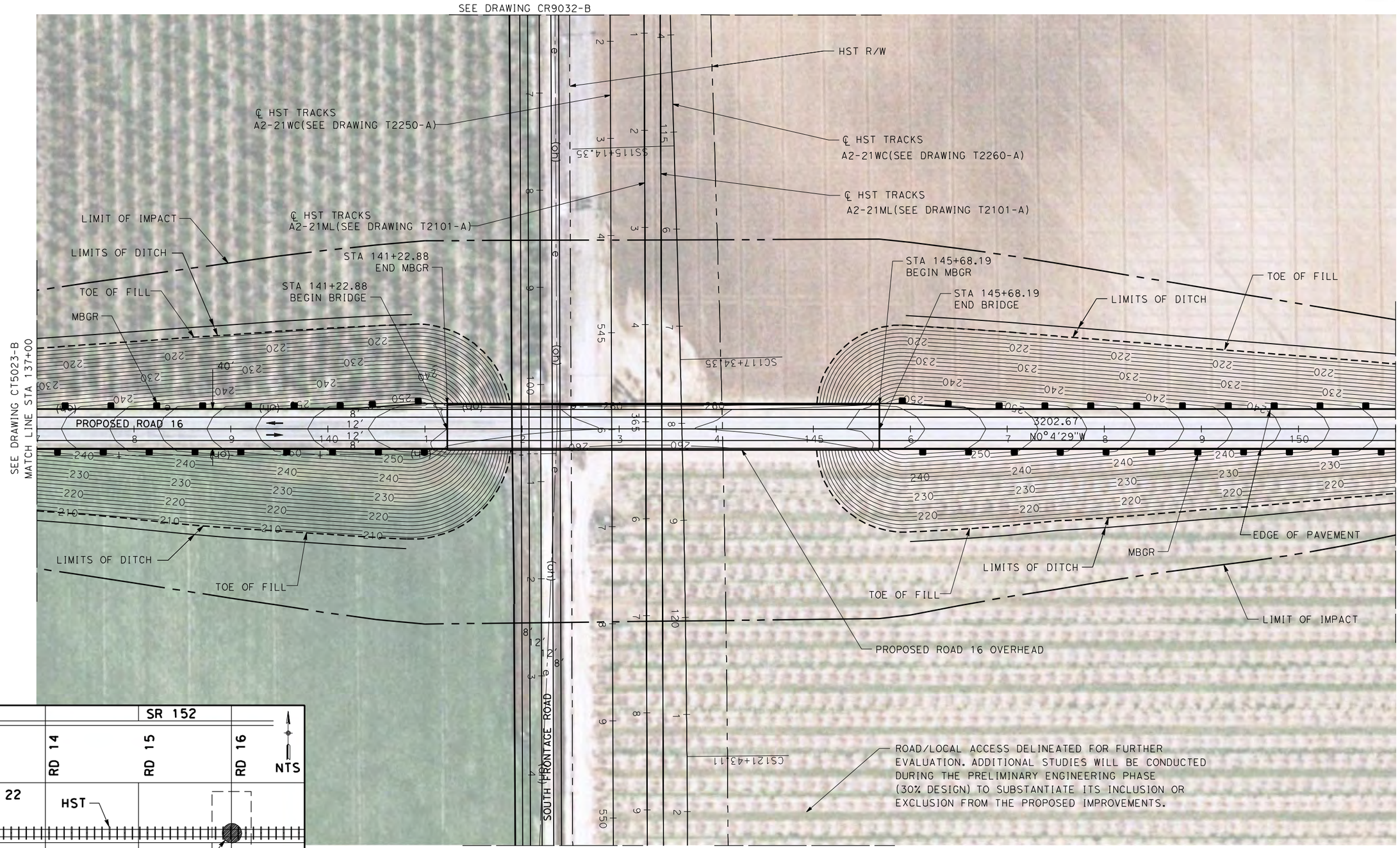

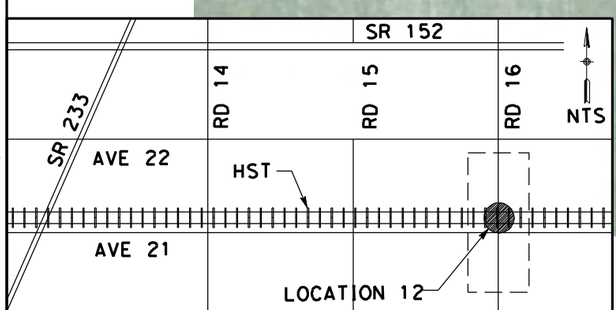

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6024-B THROUGH CT6026-B

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

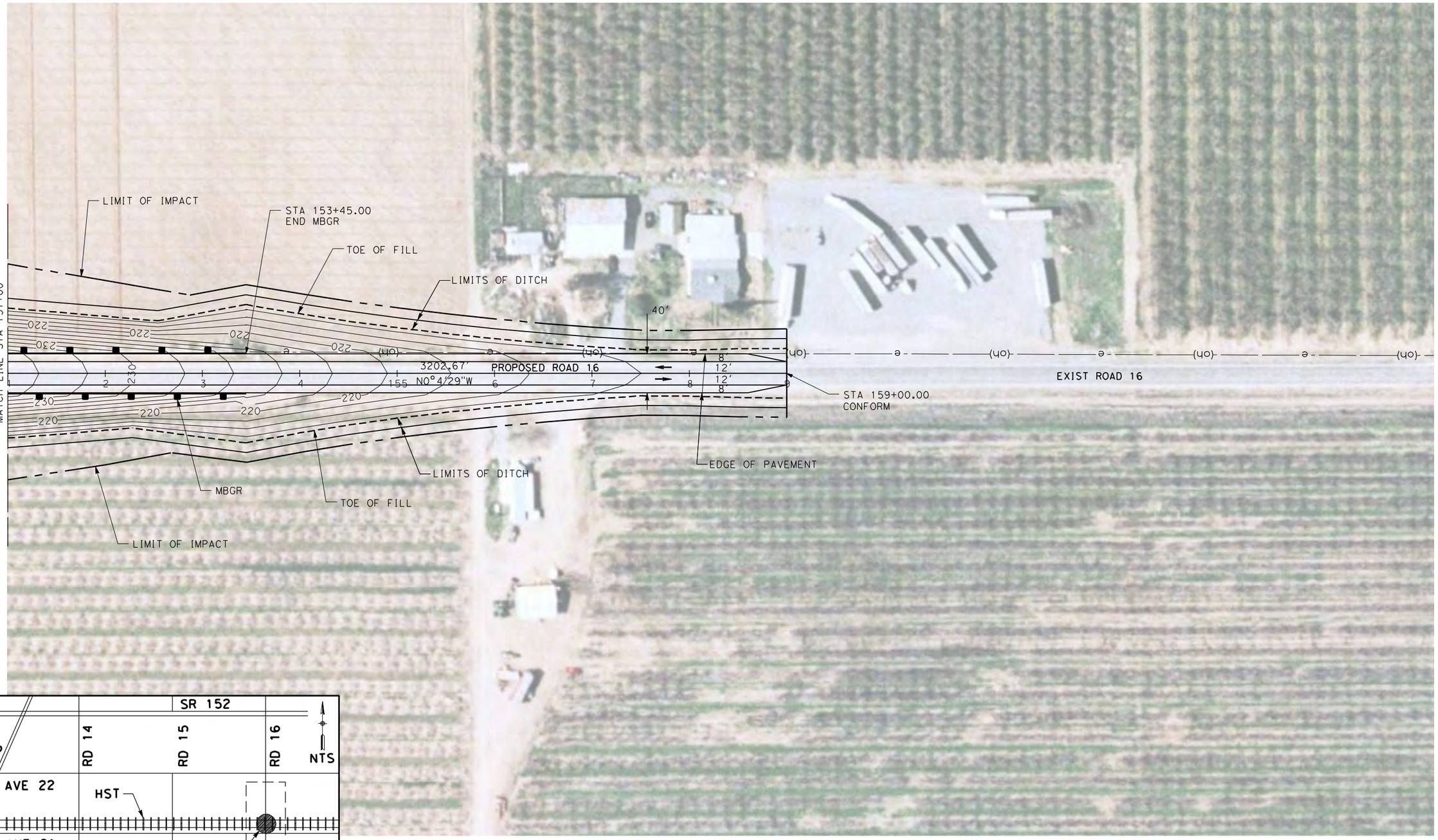
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

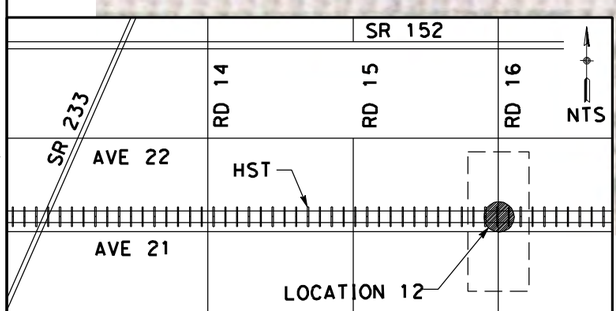
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT5024-B
SCALE AS SHOWN
SHEET NO. ### OF ###

ayeled





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT6024-B THROUGH CT6026-B

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT5025-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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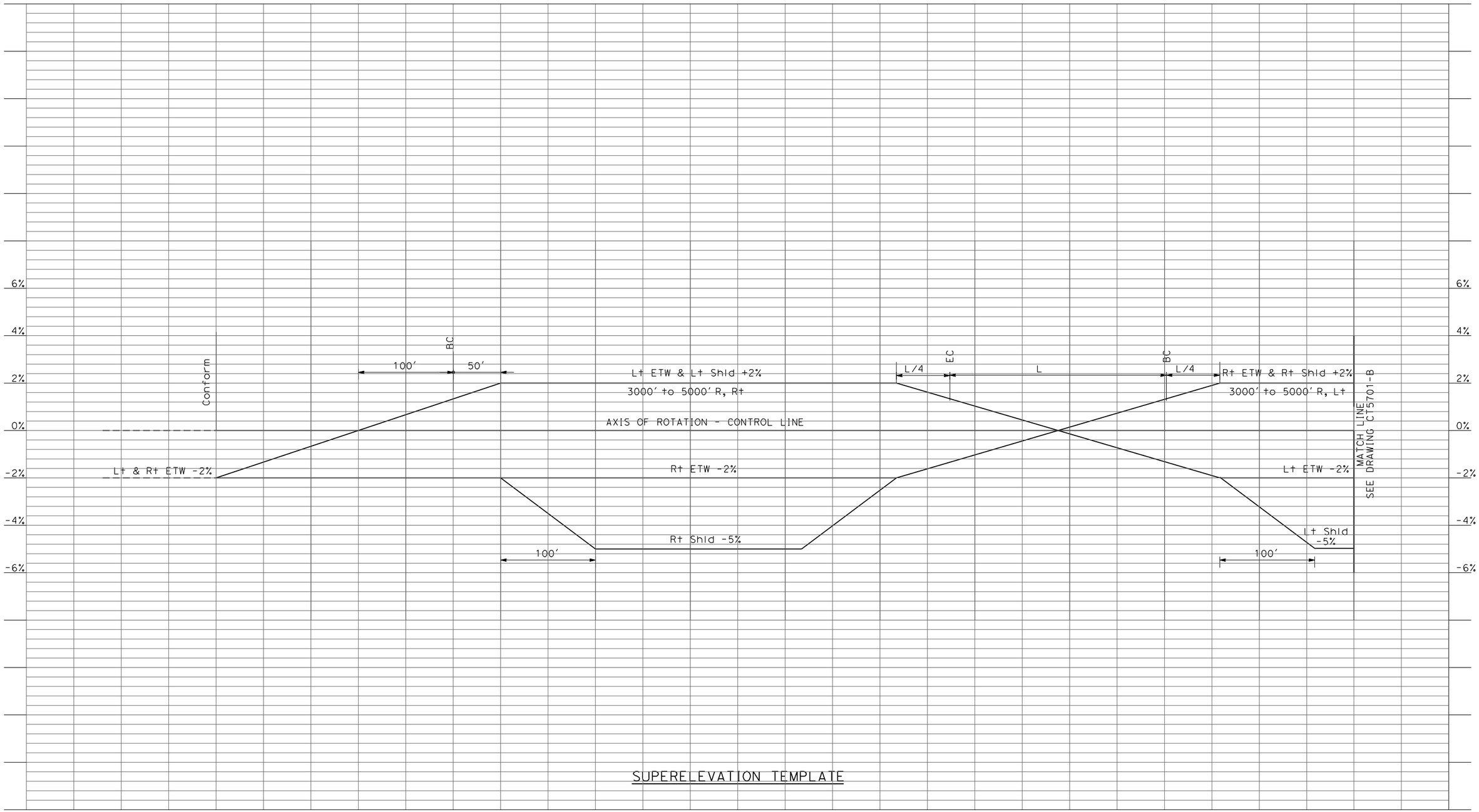
ayelea



SUPERELEVATION TEMPLATE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21 HYBRID)
GRADE SEPARATION
SUPERELEVATION TEMPLATE
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5700-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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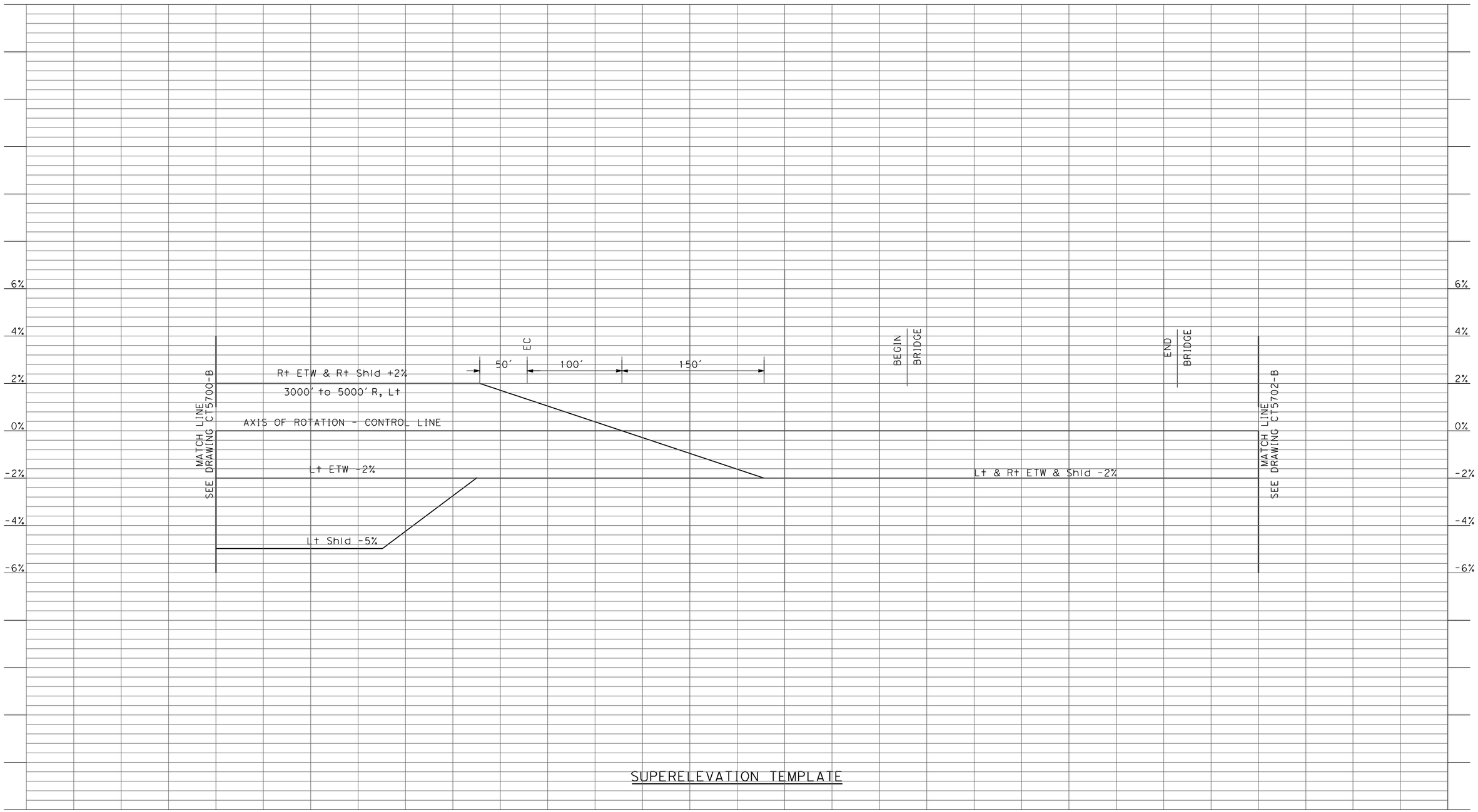

SUPERELEVATION TEMPLATE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
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Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21 HYBRID)
GRADE SEPARATION
SUPERELEVATION TEMPLATE
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5701-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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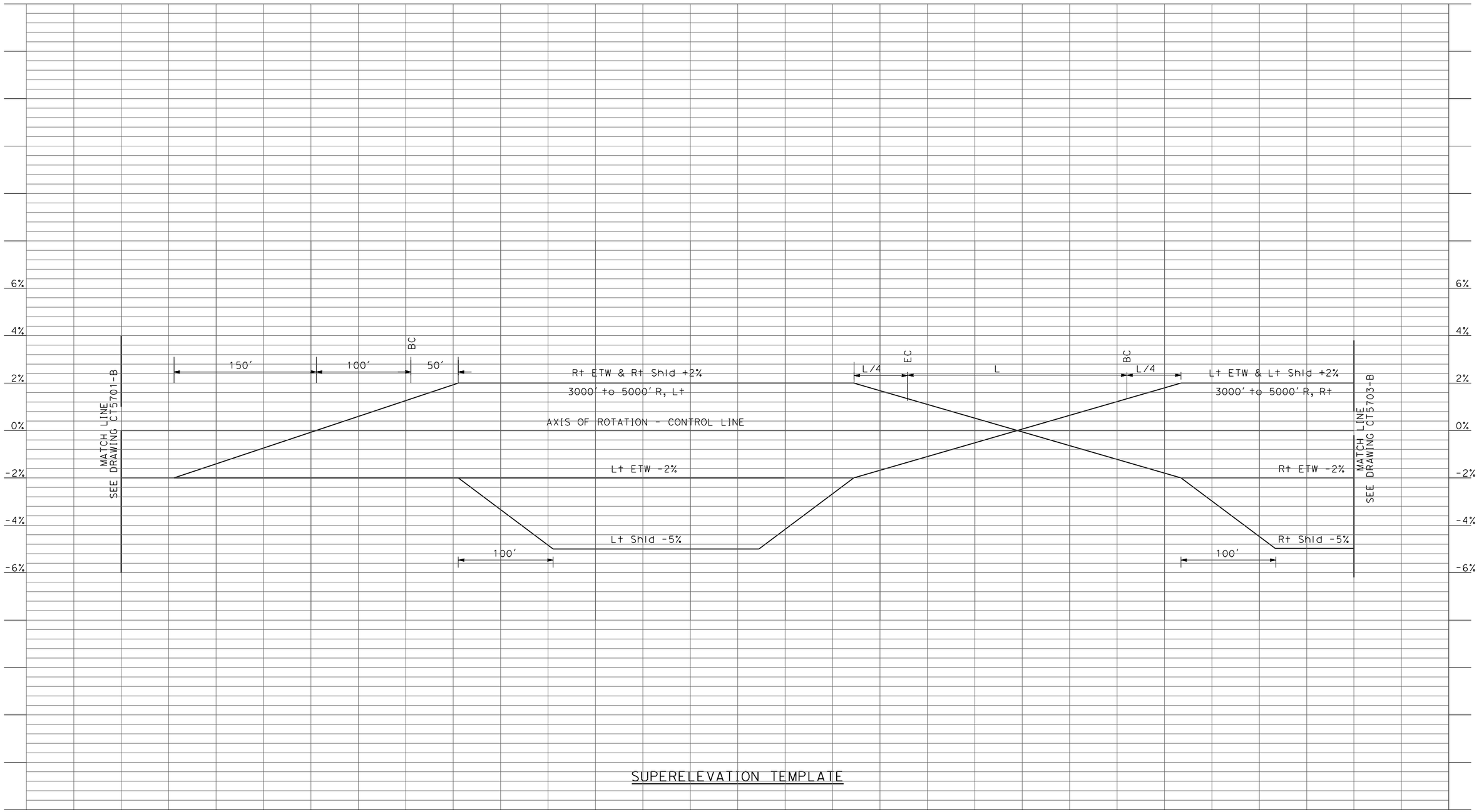

SUPERELEVATION TEMPLATE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21 HYBRID)
GRADE SEPARATION
SUPERELEVATION TEMPLATE
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5702-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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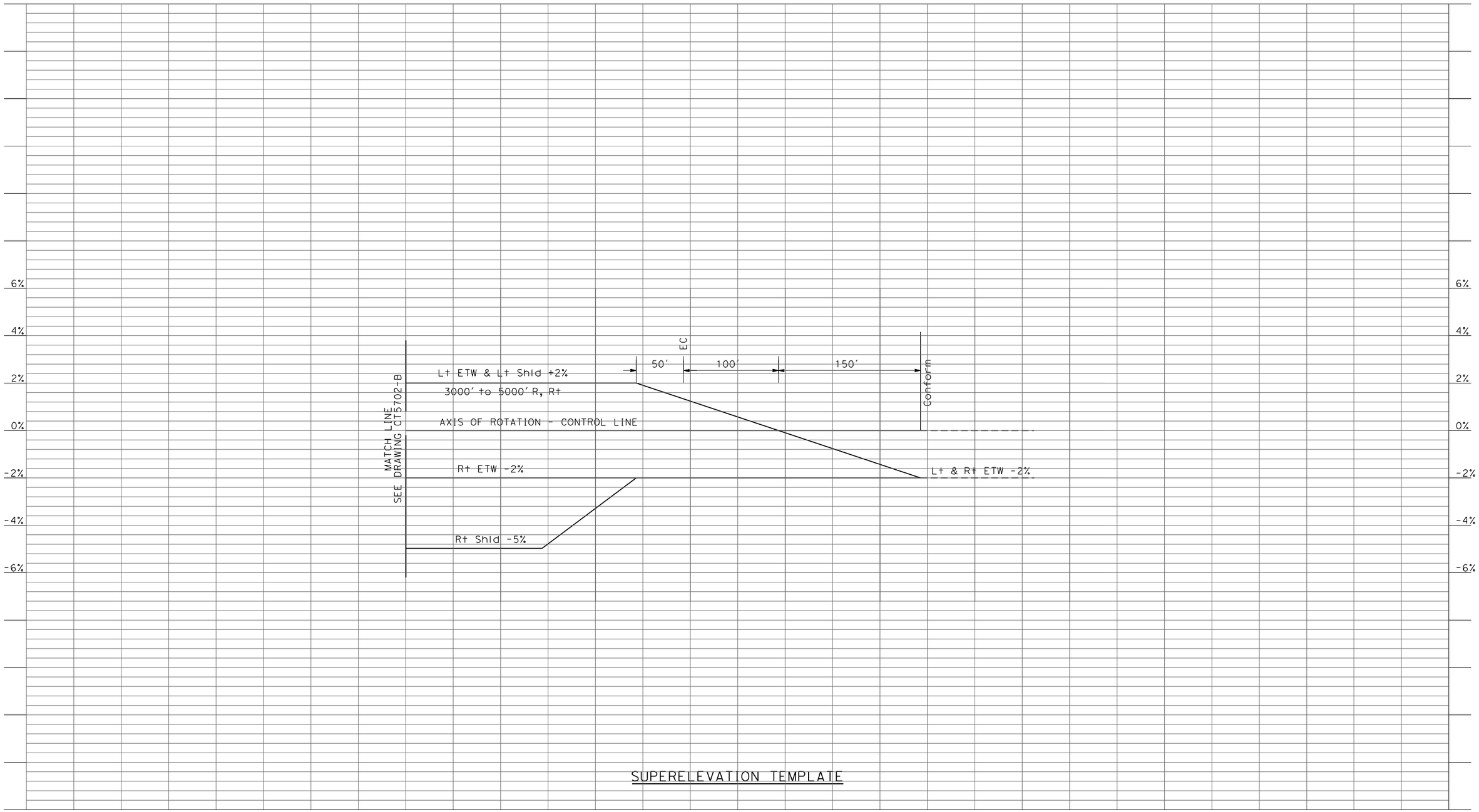
oyeled



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (AVE 21 HYBRID)
GRADE SEPARATION
SUPERELEVATION TEMPLATE
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5703-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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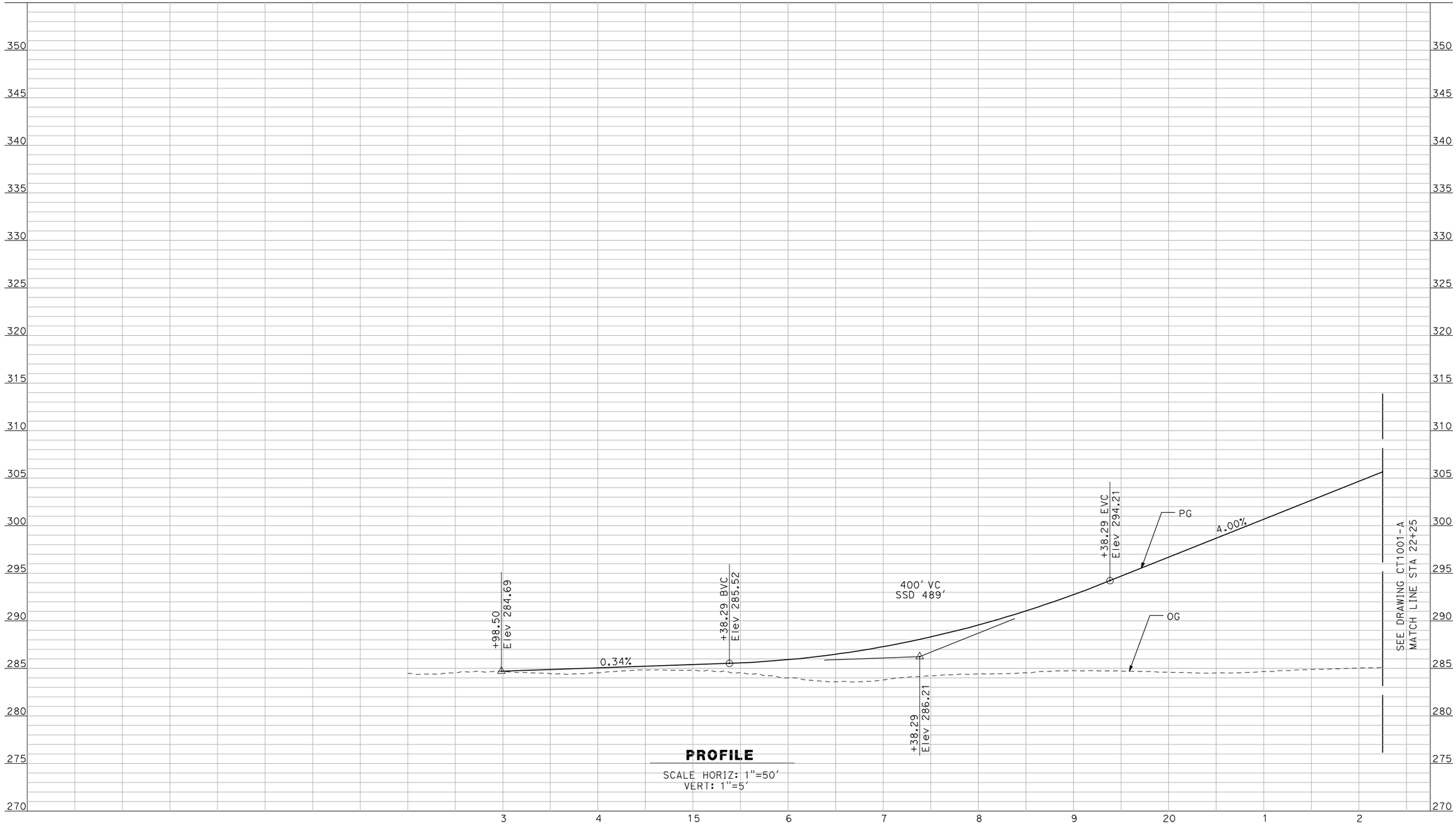
oyeled



PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 9
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1000-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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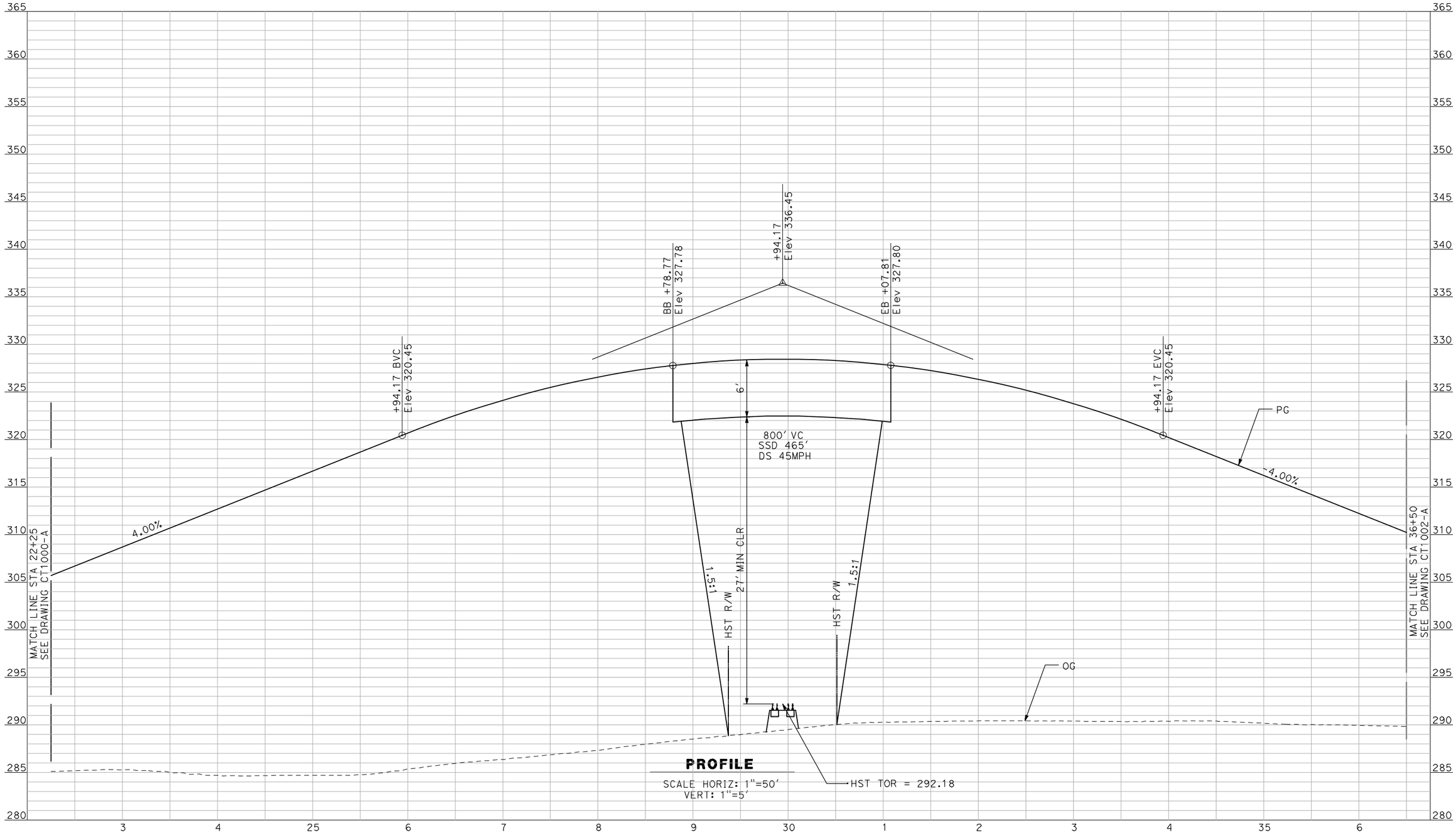

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 9
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1001-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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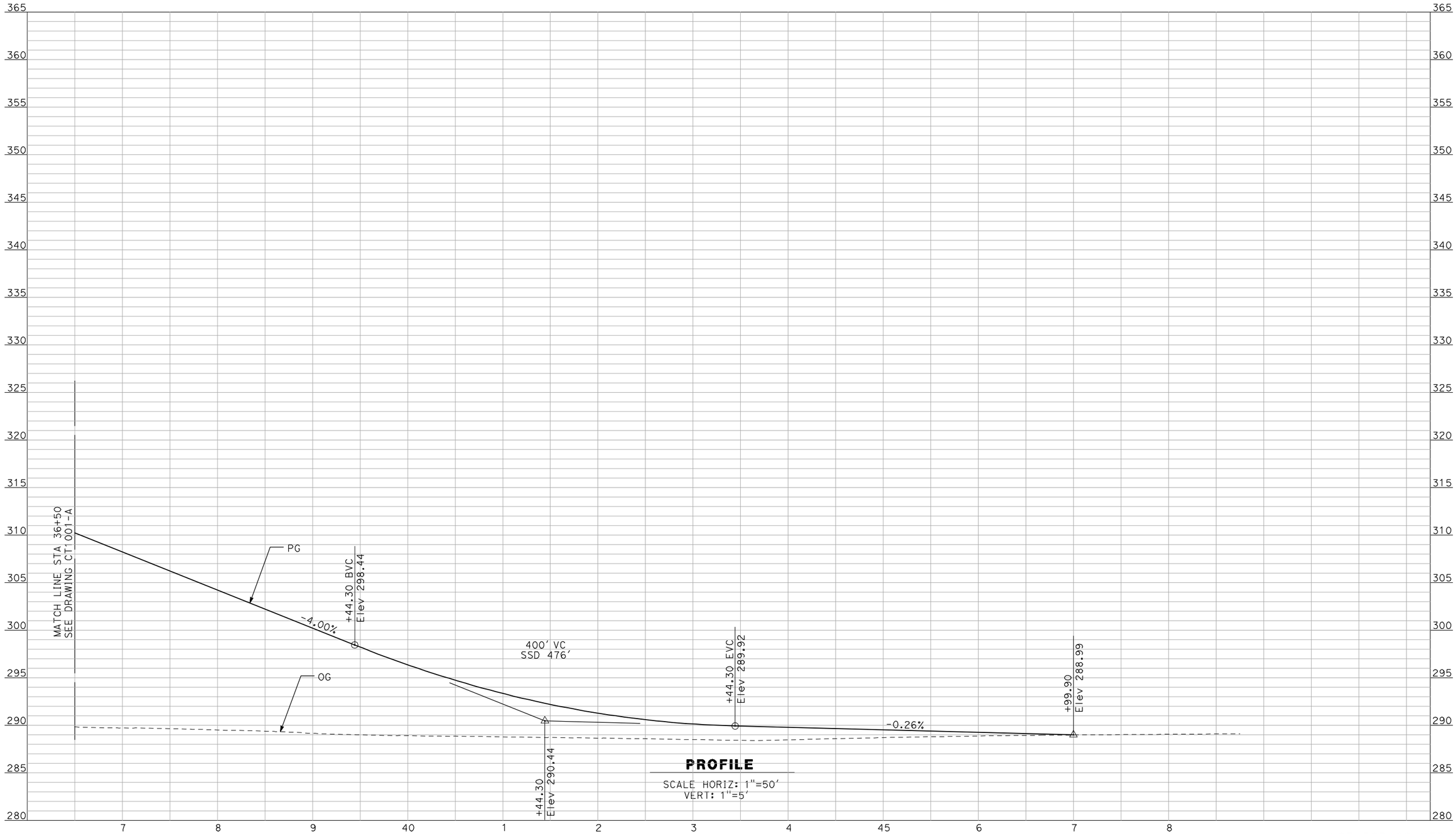

PROFILE

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 9
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1002-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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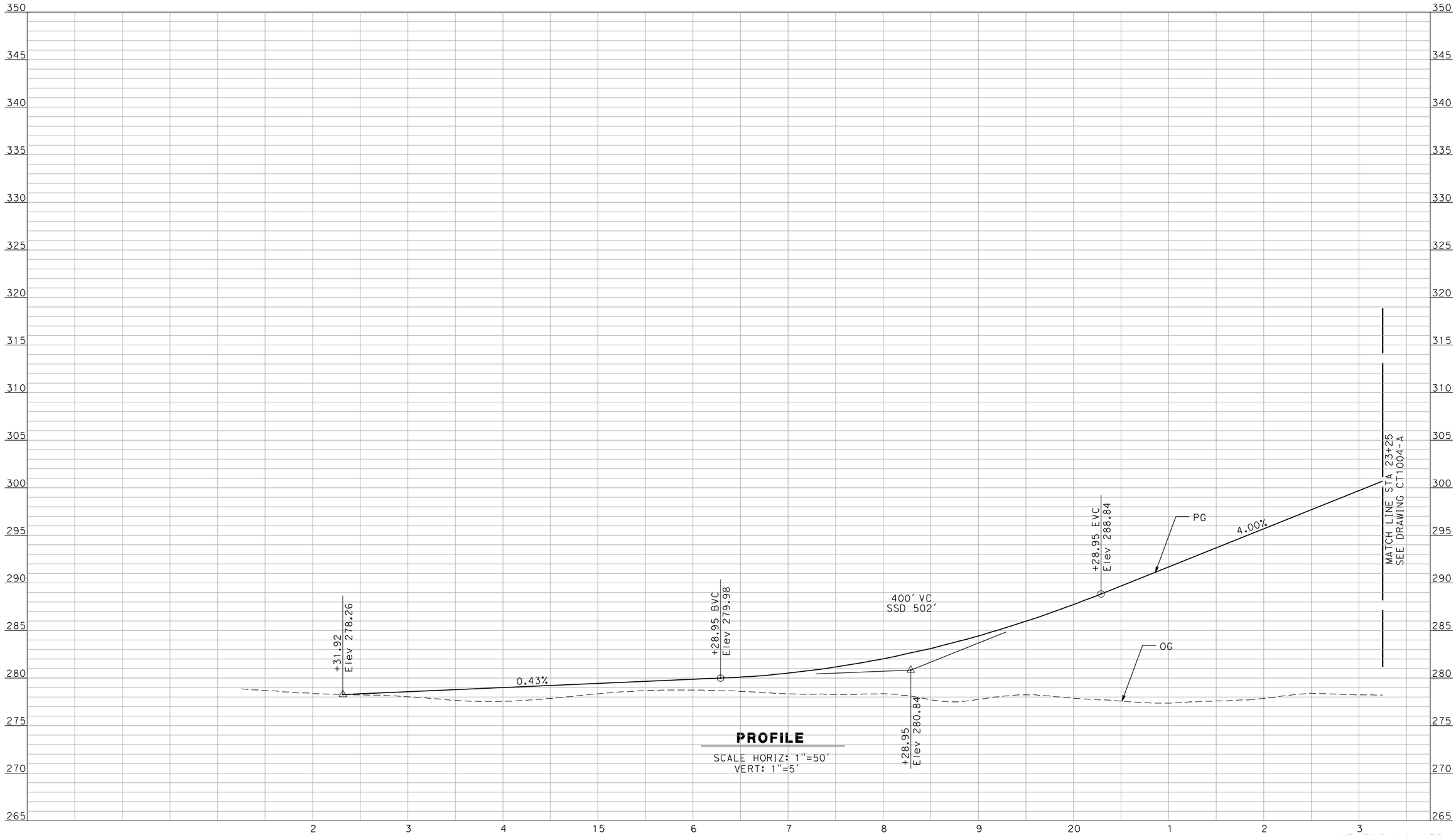

PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

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MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 10
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1003-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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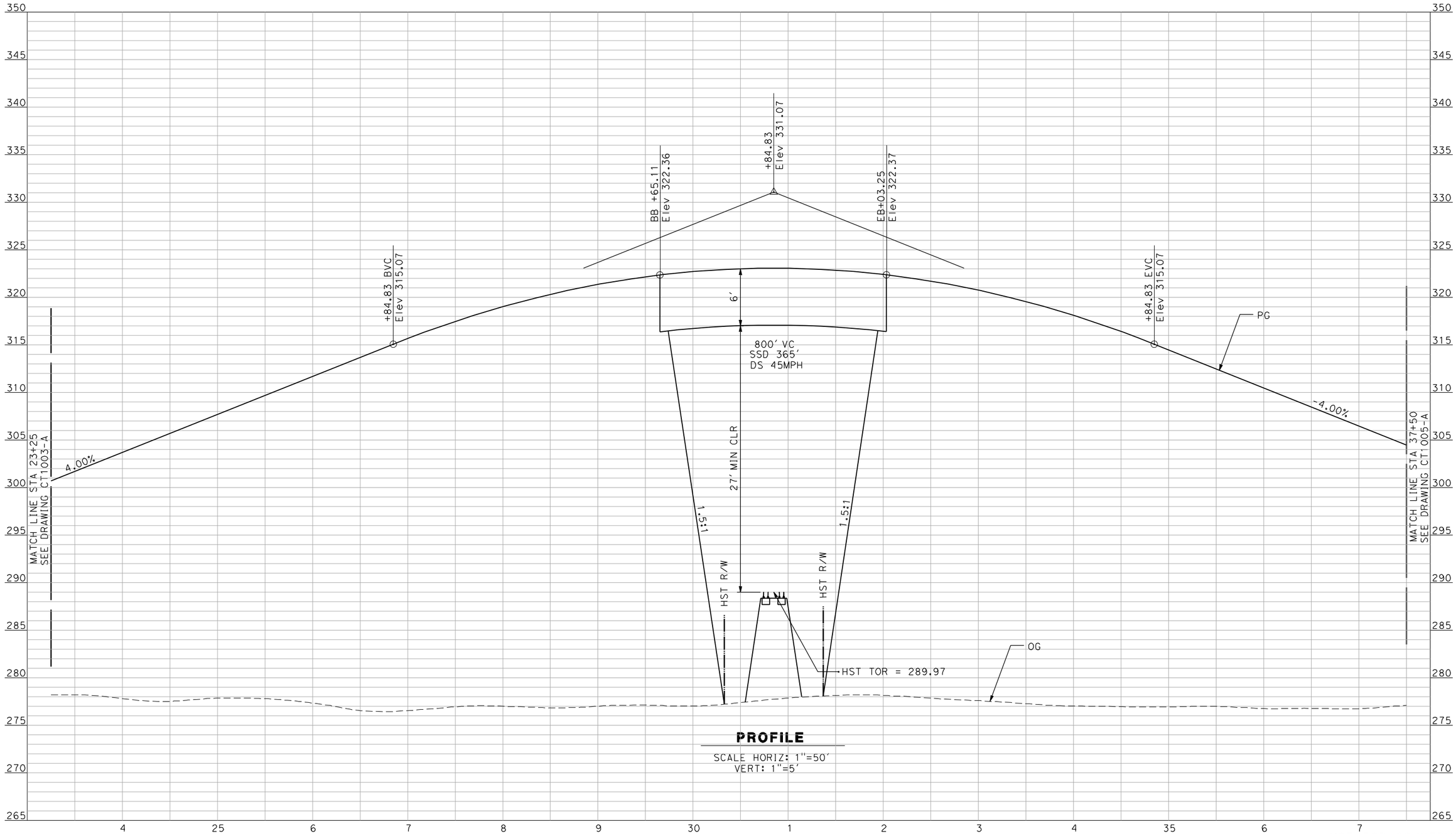

PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

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MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 10
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1004-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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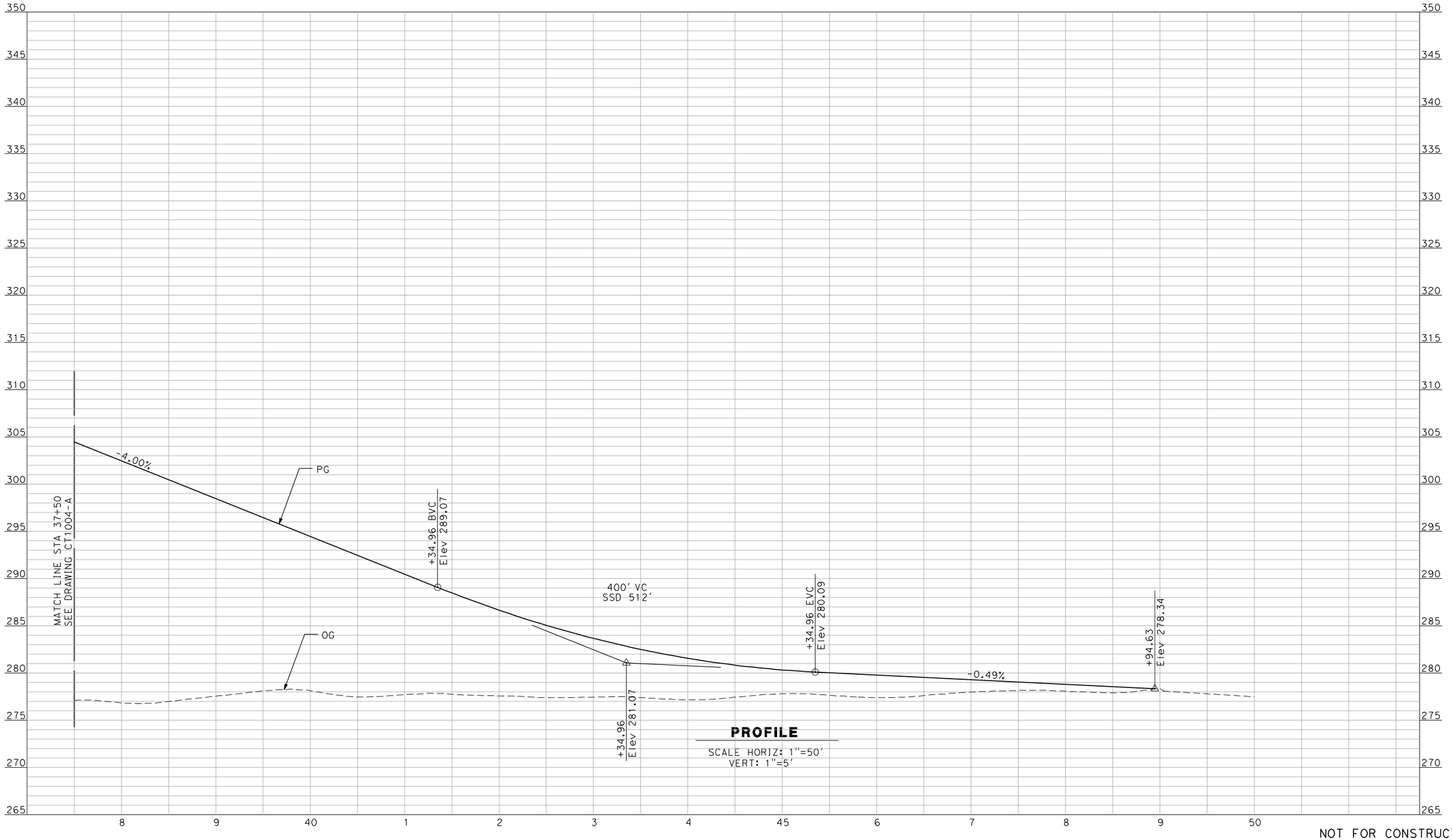

PROFILE

SCALE HORIZ: 1"=50'
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REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

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BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 10
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1005-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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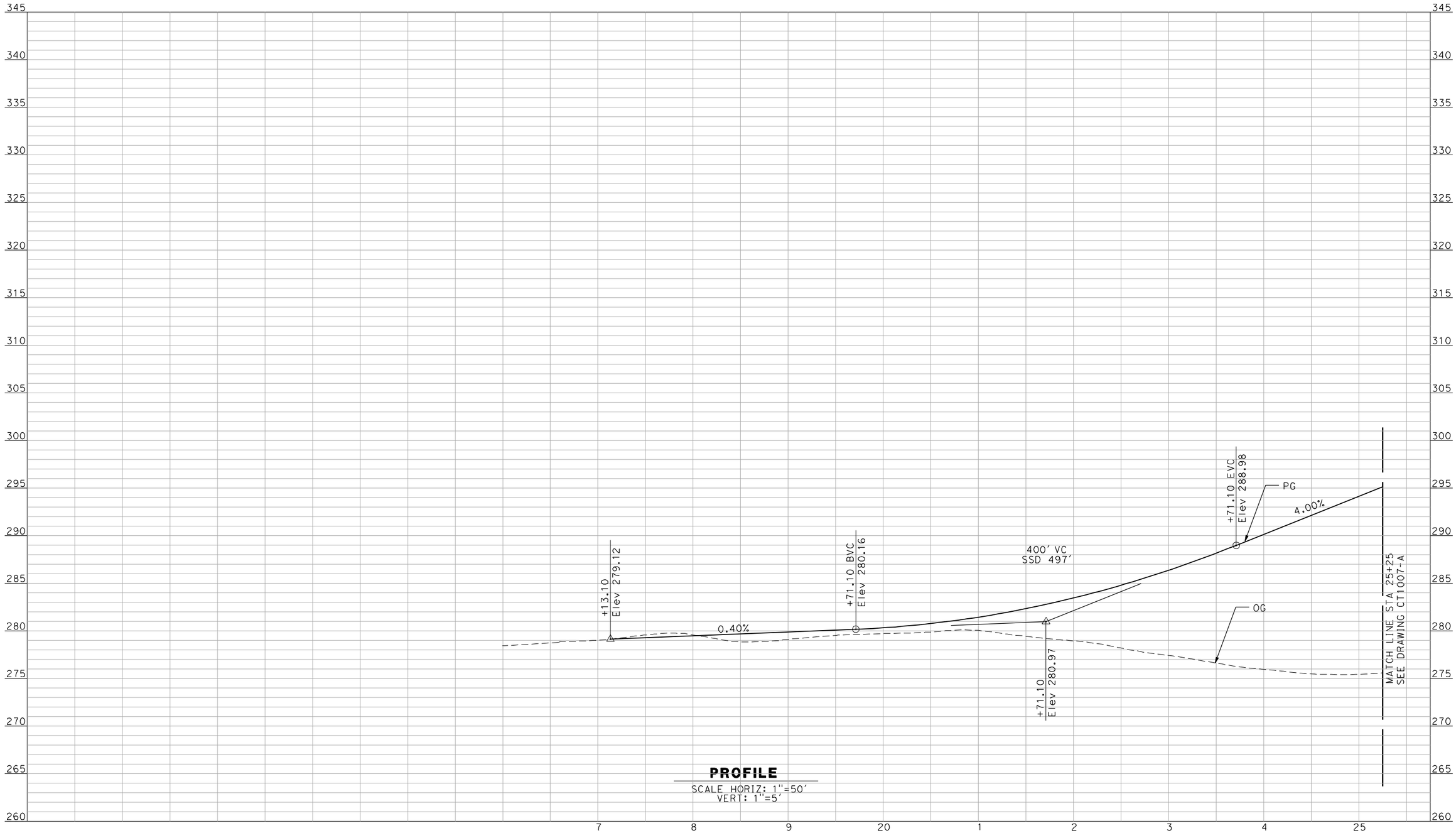

PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

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MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 11
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1006-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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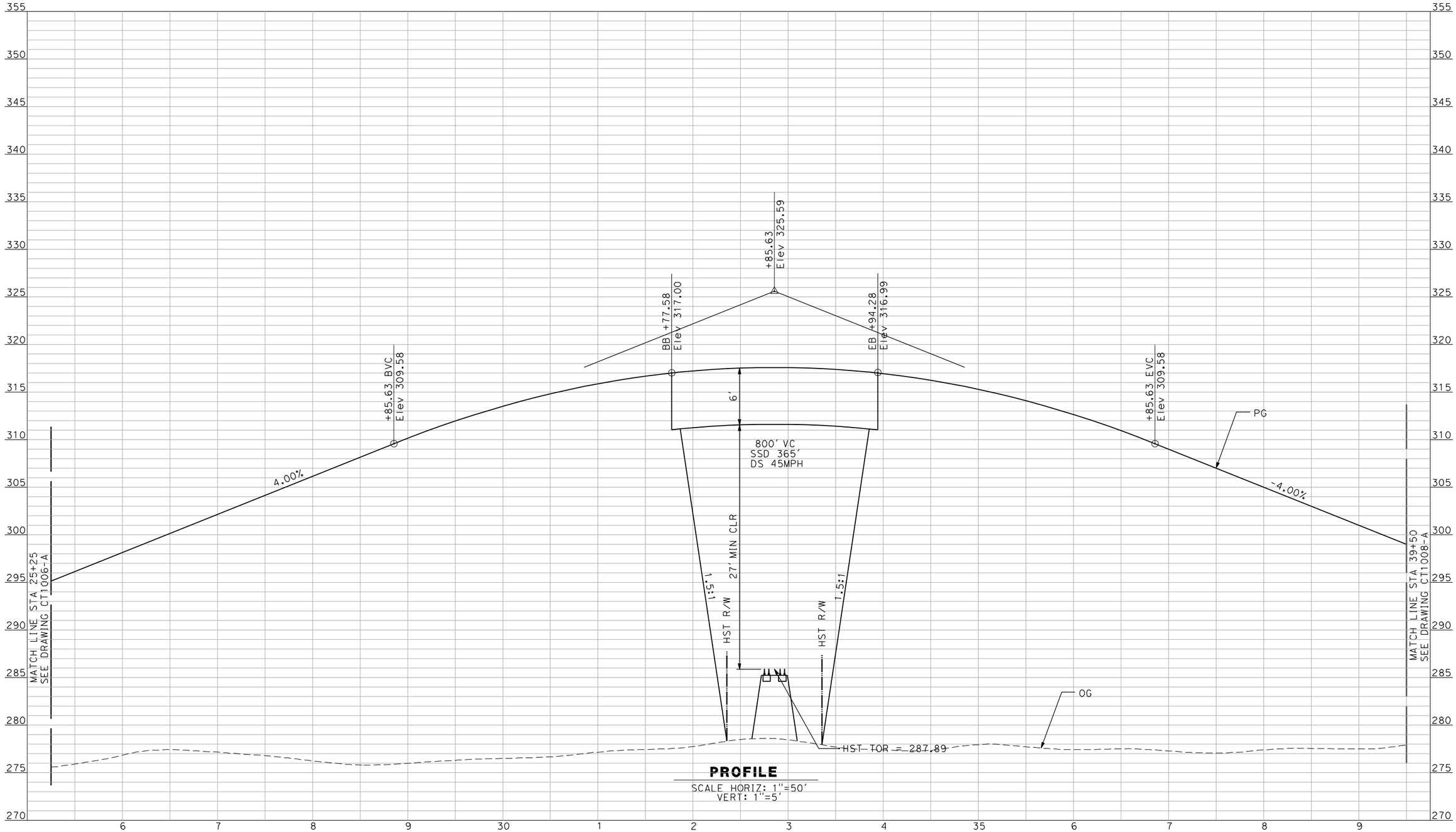

PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 11
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1007-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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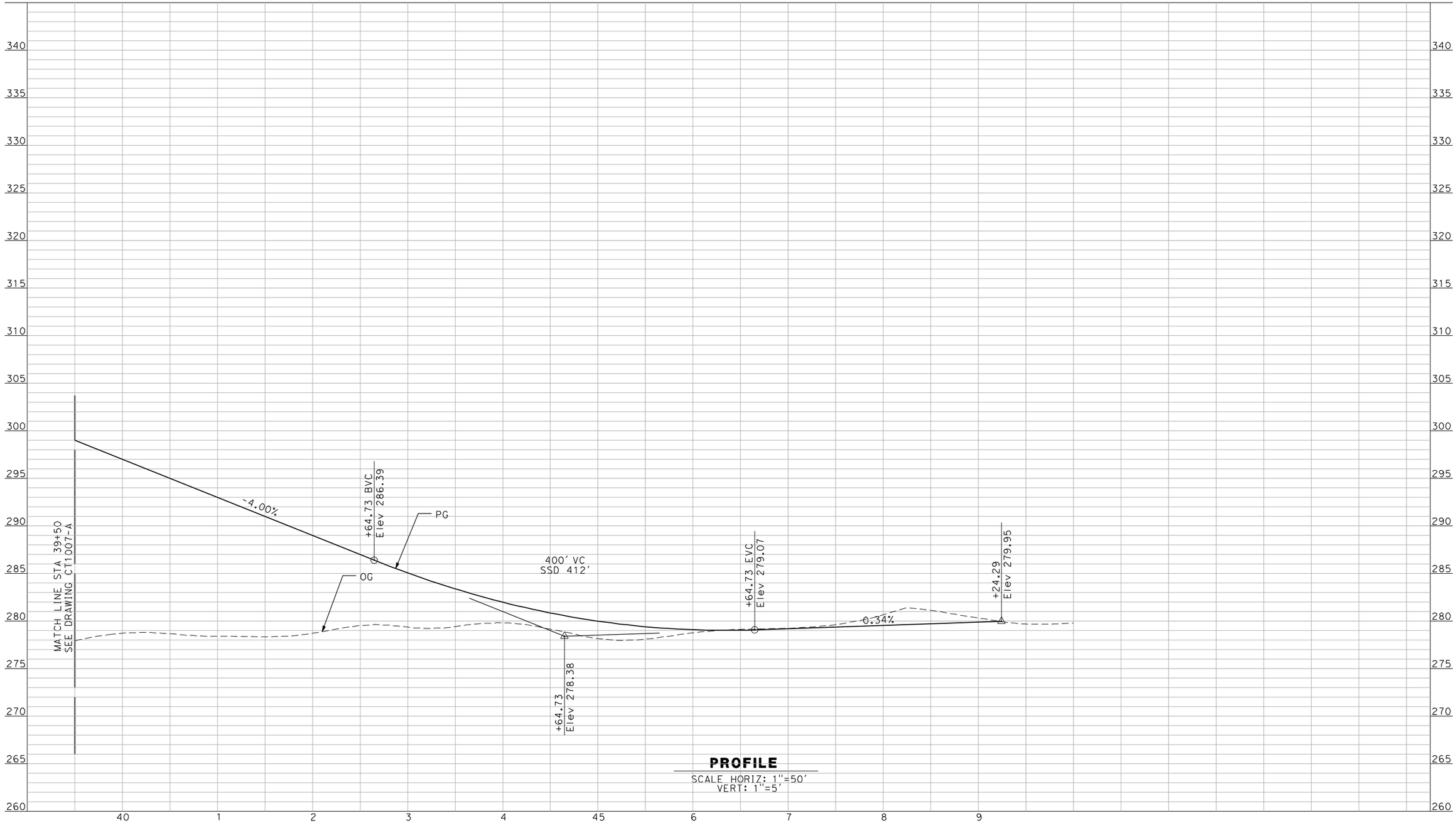

PROFILE

SCALE HORIZ: 1"=50'
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REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

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MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 11
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1008-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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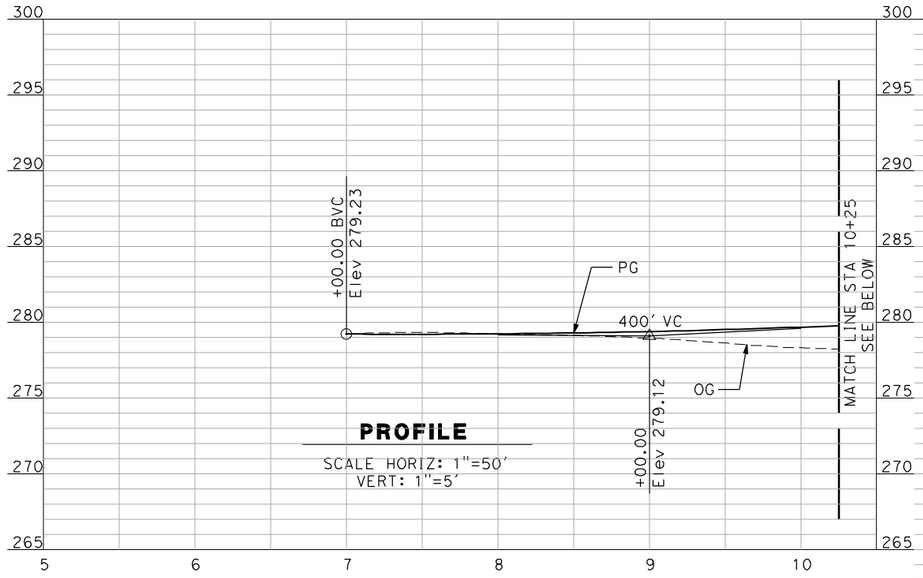

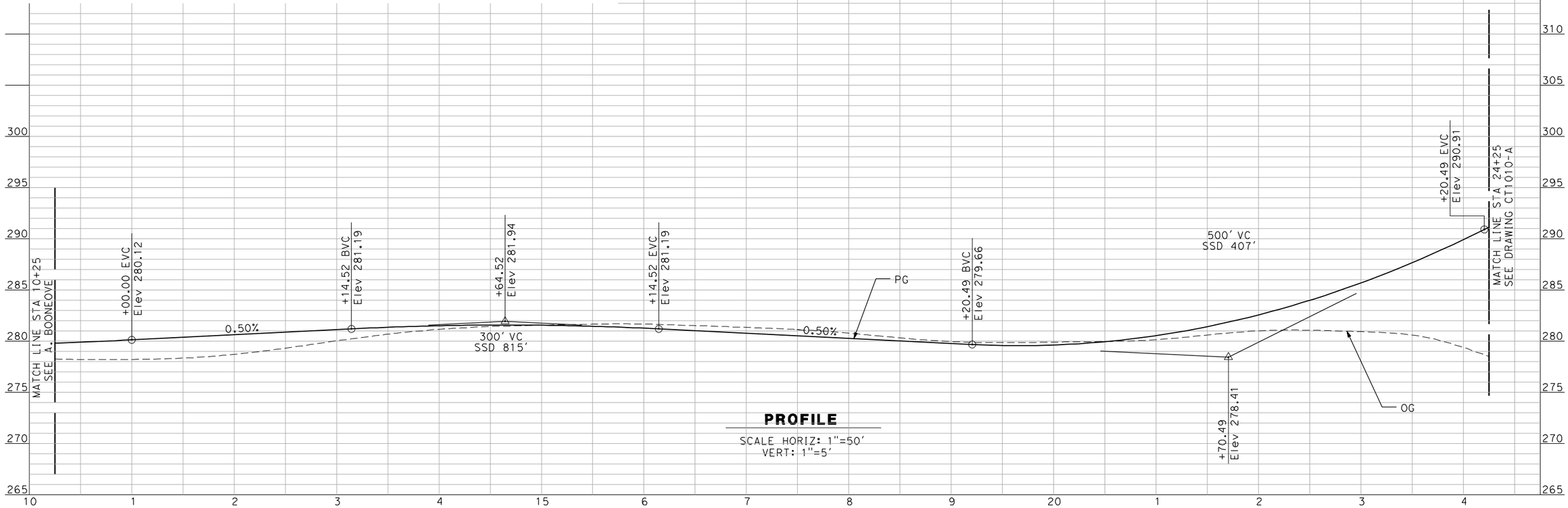

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REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 12
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1009-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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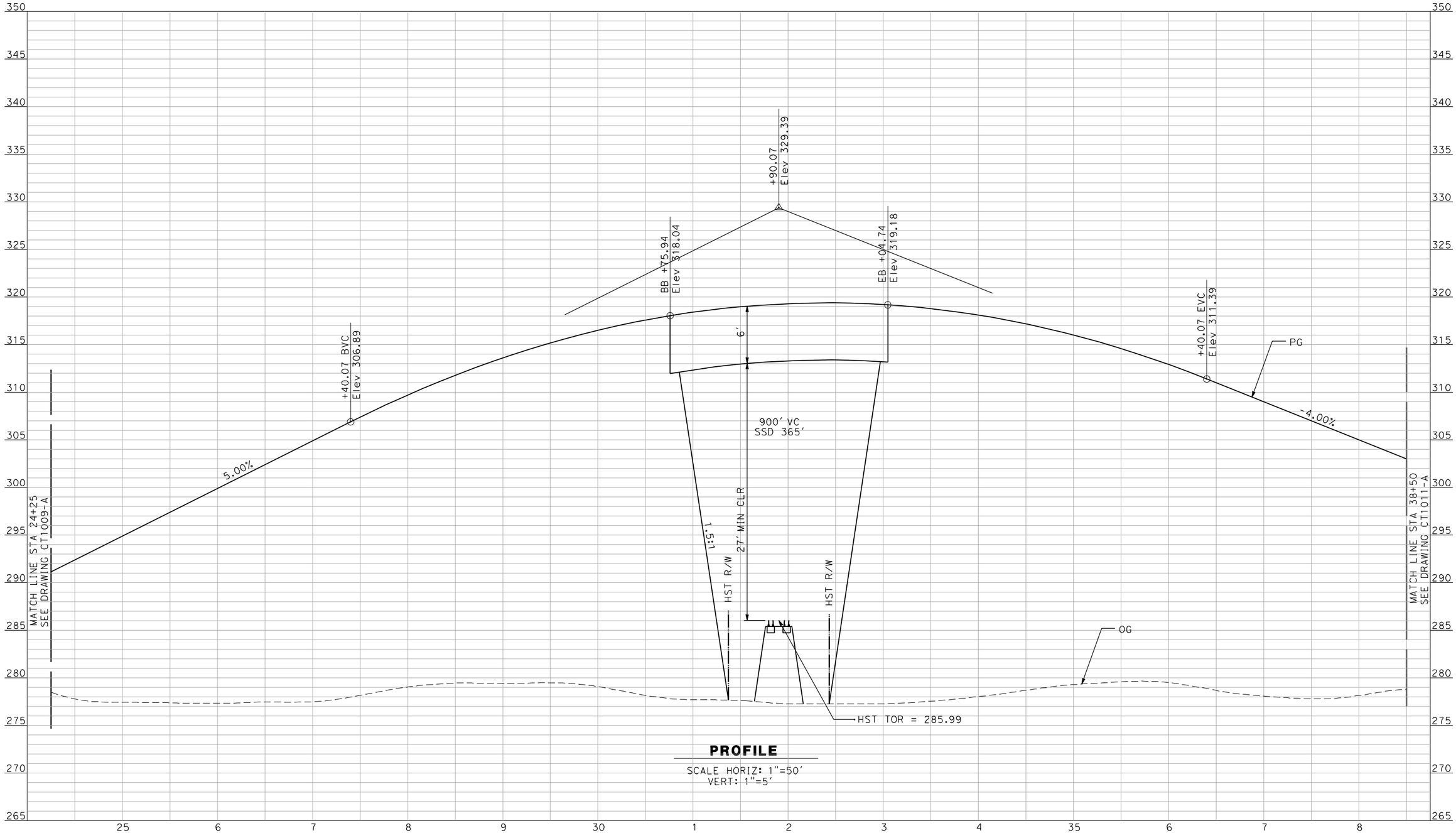

PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 12
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1010-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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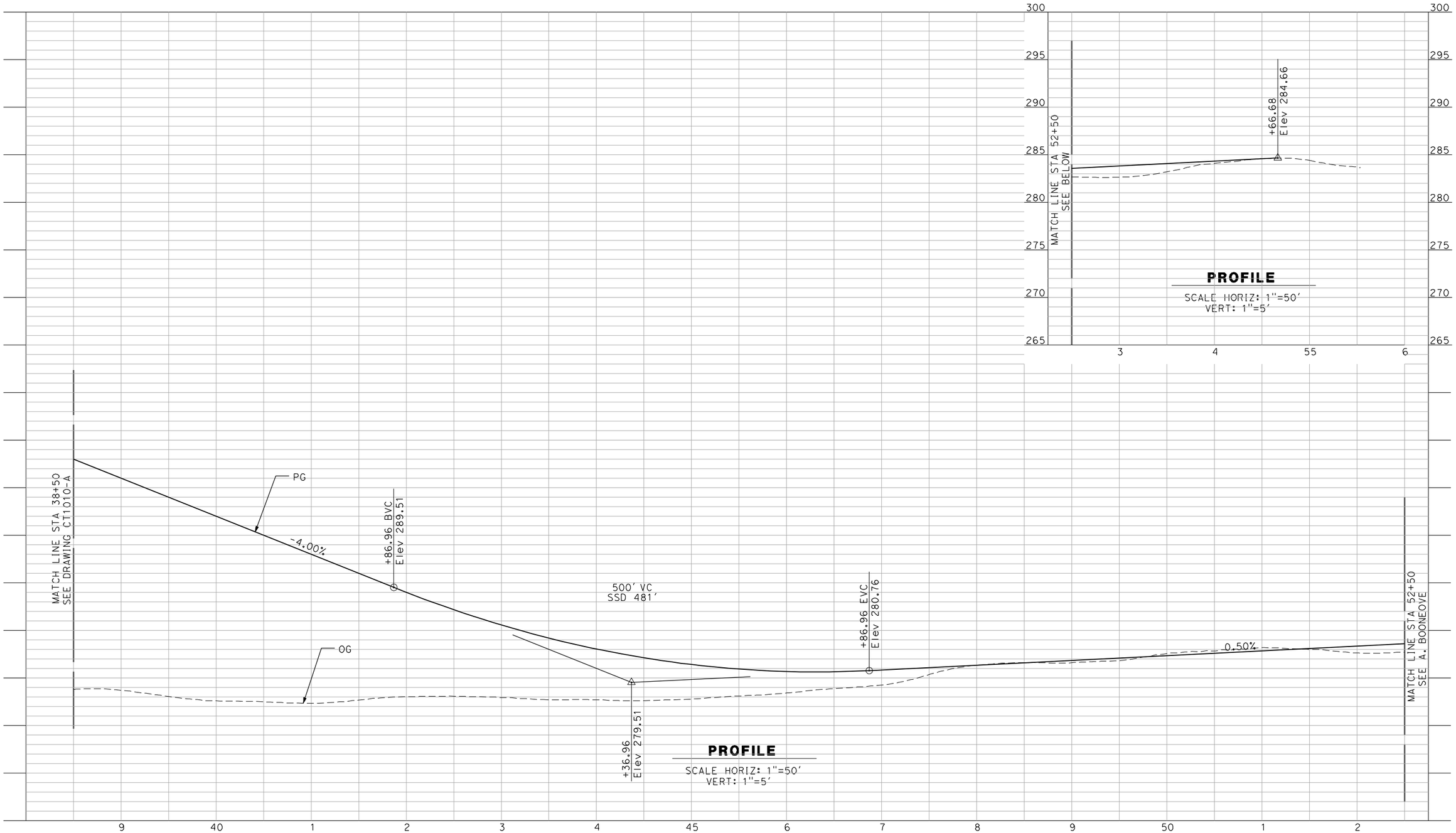

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REV	DATE	BY	CHK	APP	DESCRIPTION
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 12
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1011-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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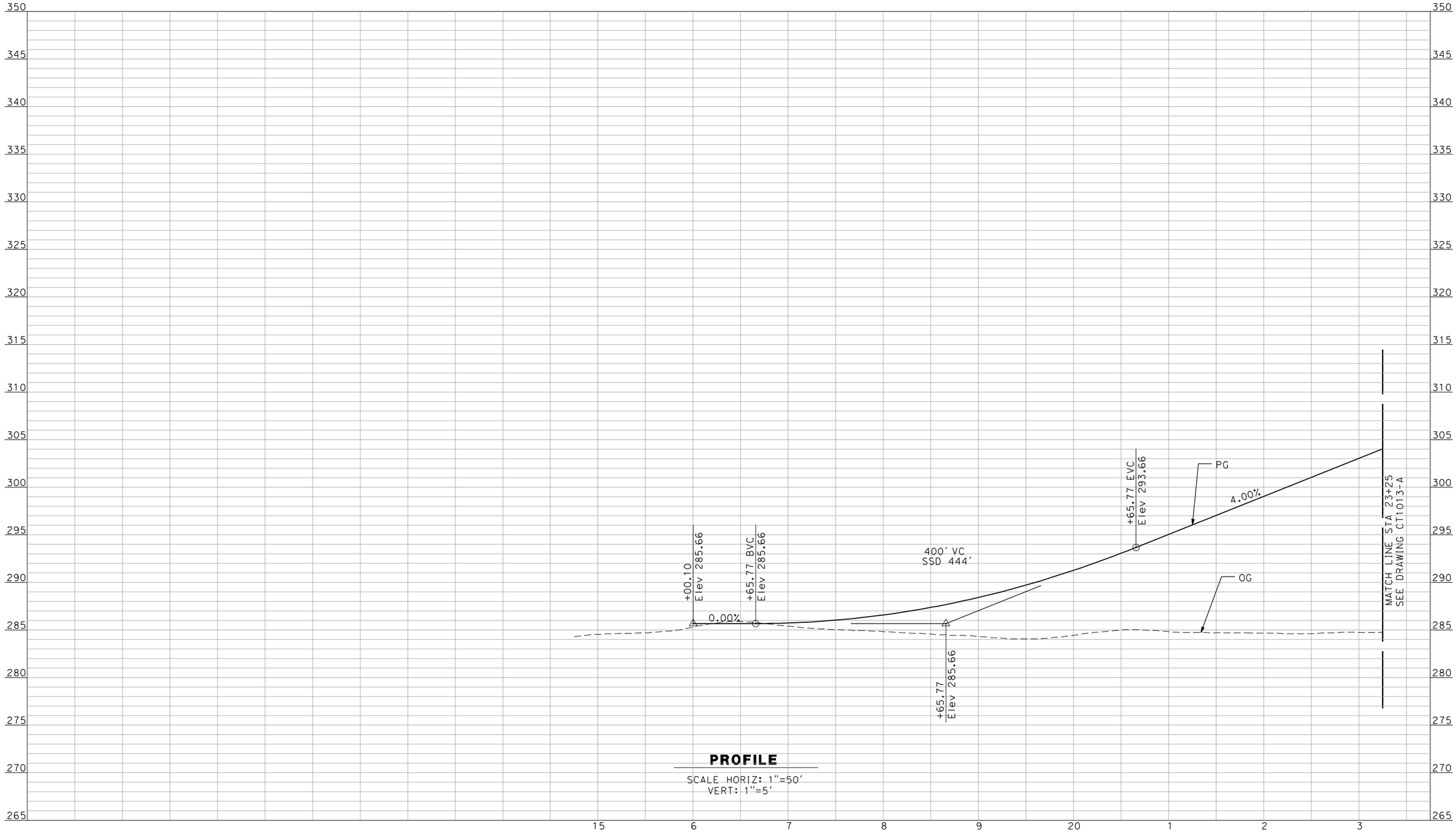

PROFILE

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 13
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1012-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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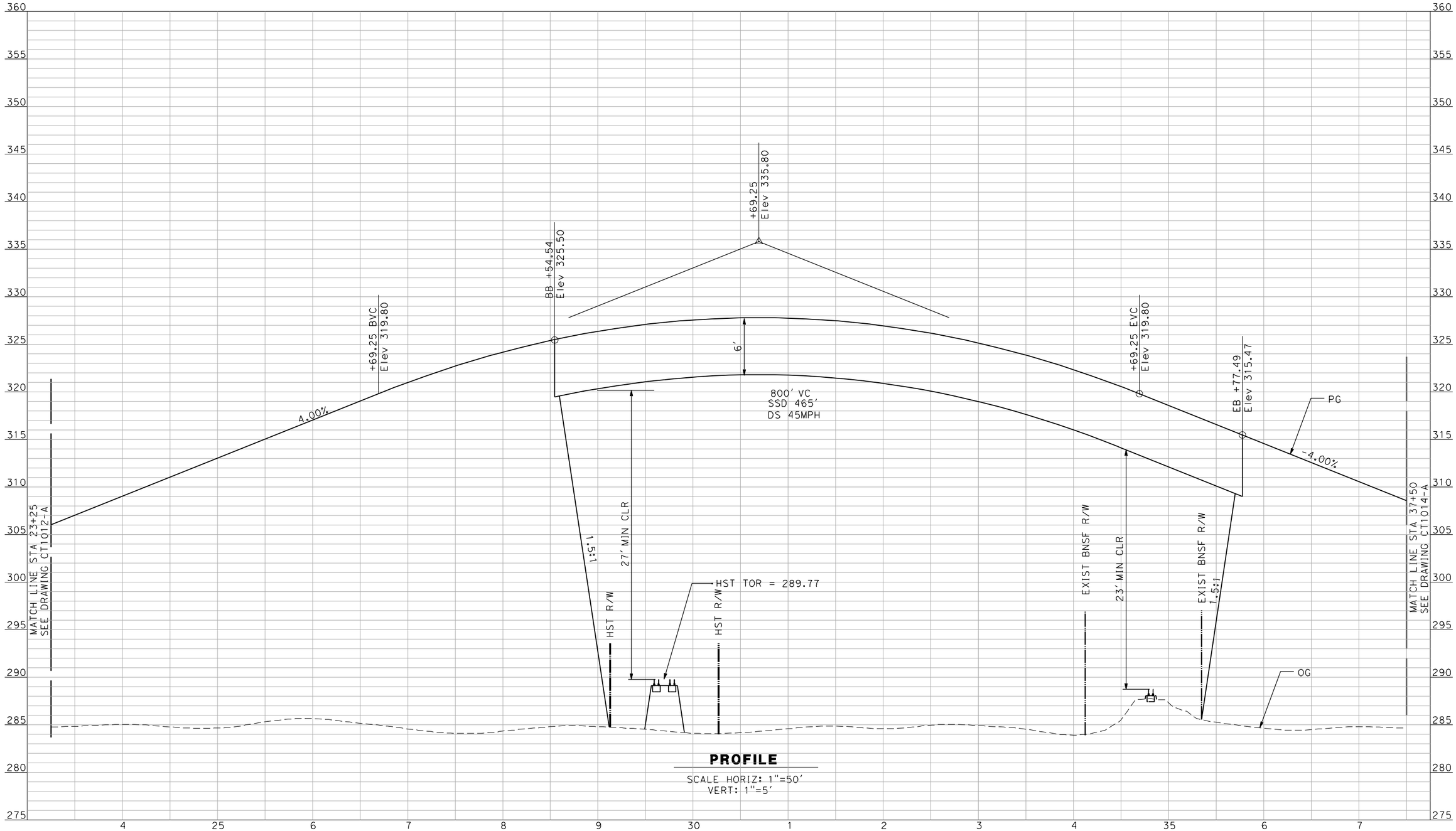

PROFILE

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 13
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1013-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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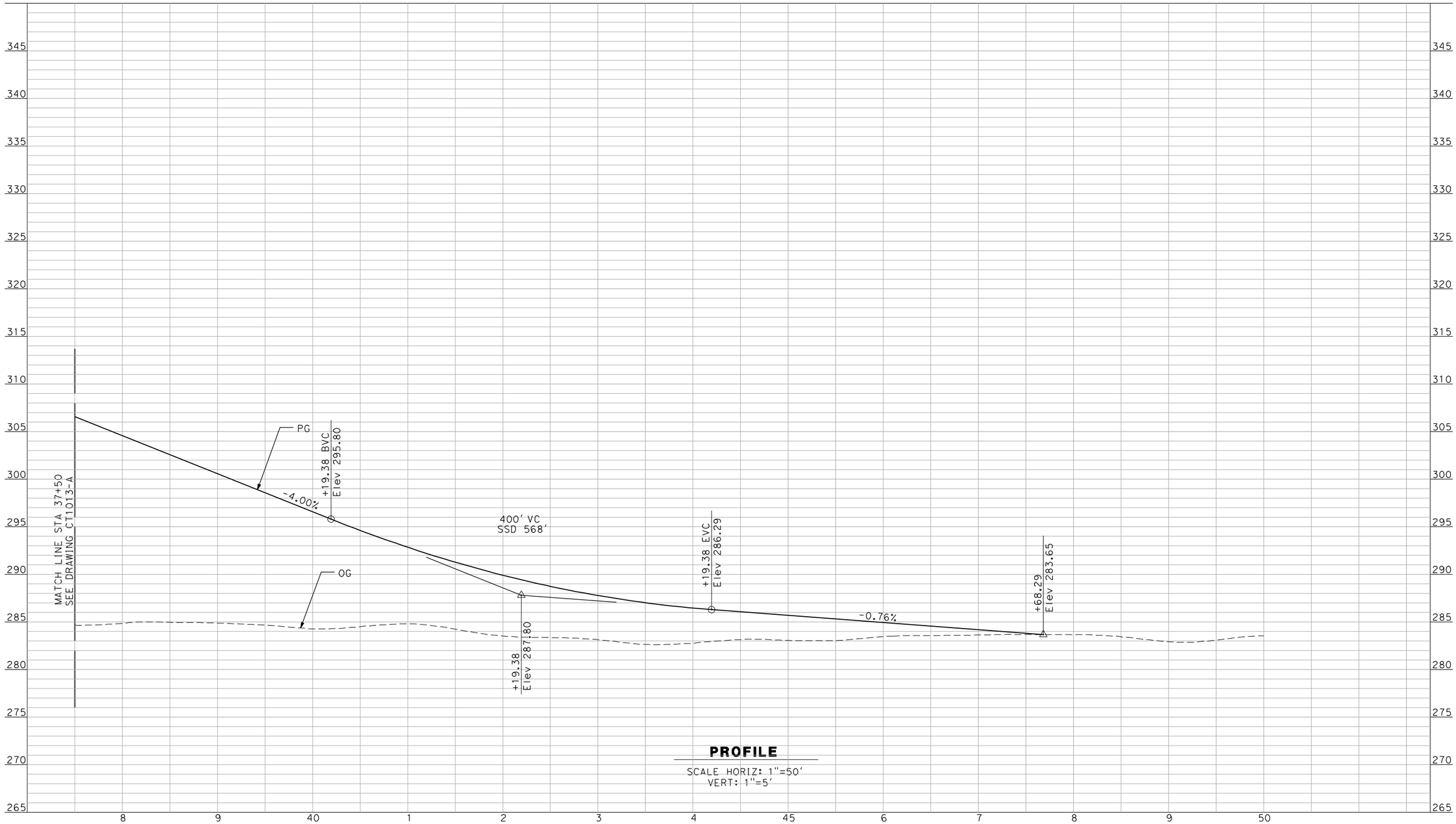

PROFILE

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 13
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1014-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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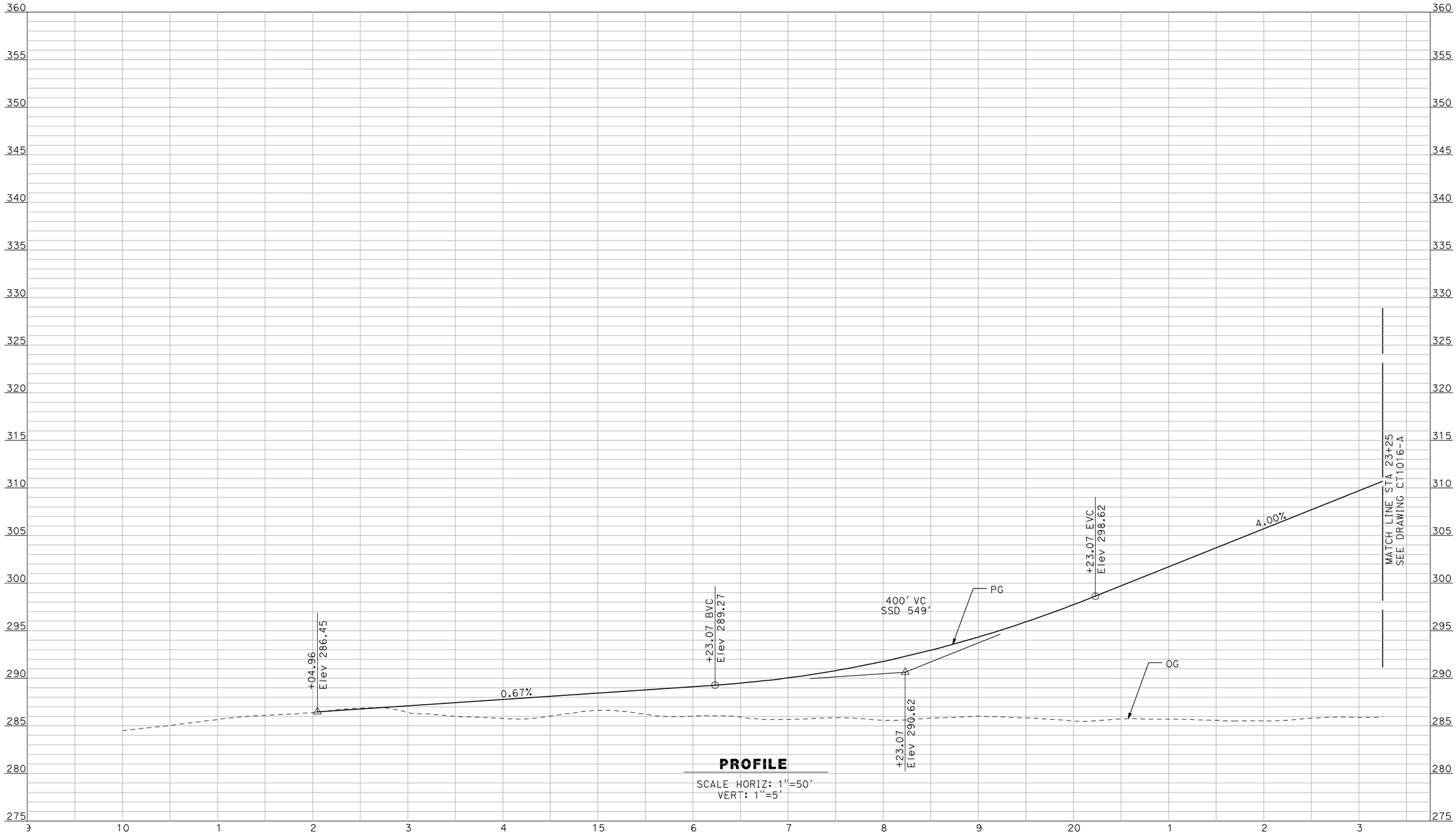

PROFILE

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MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 15
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1015-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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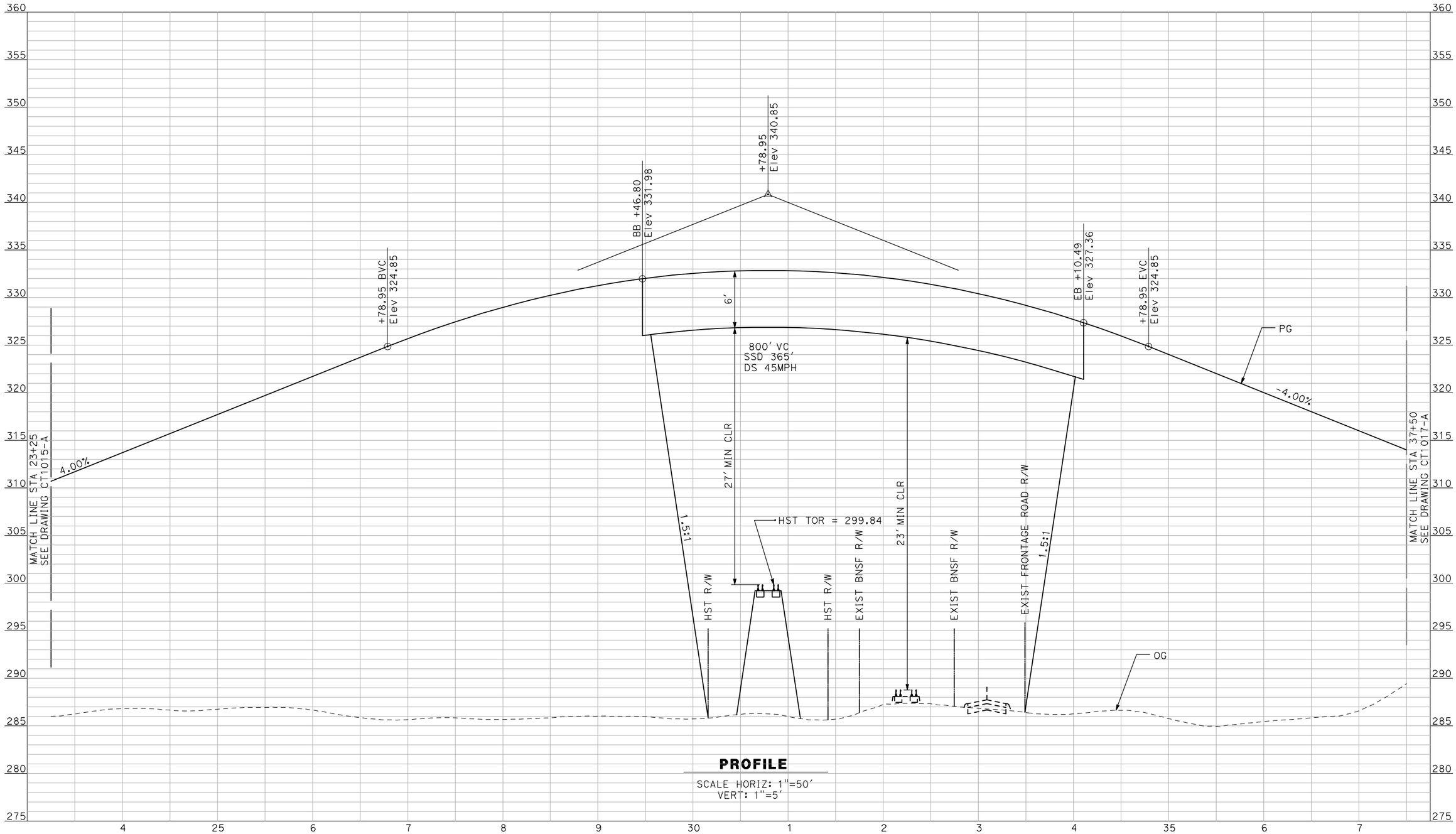

PROFILE

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 15
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1016-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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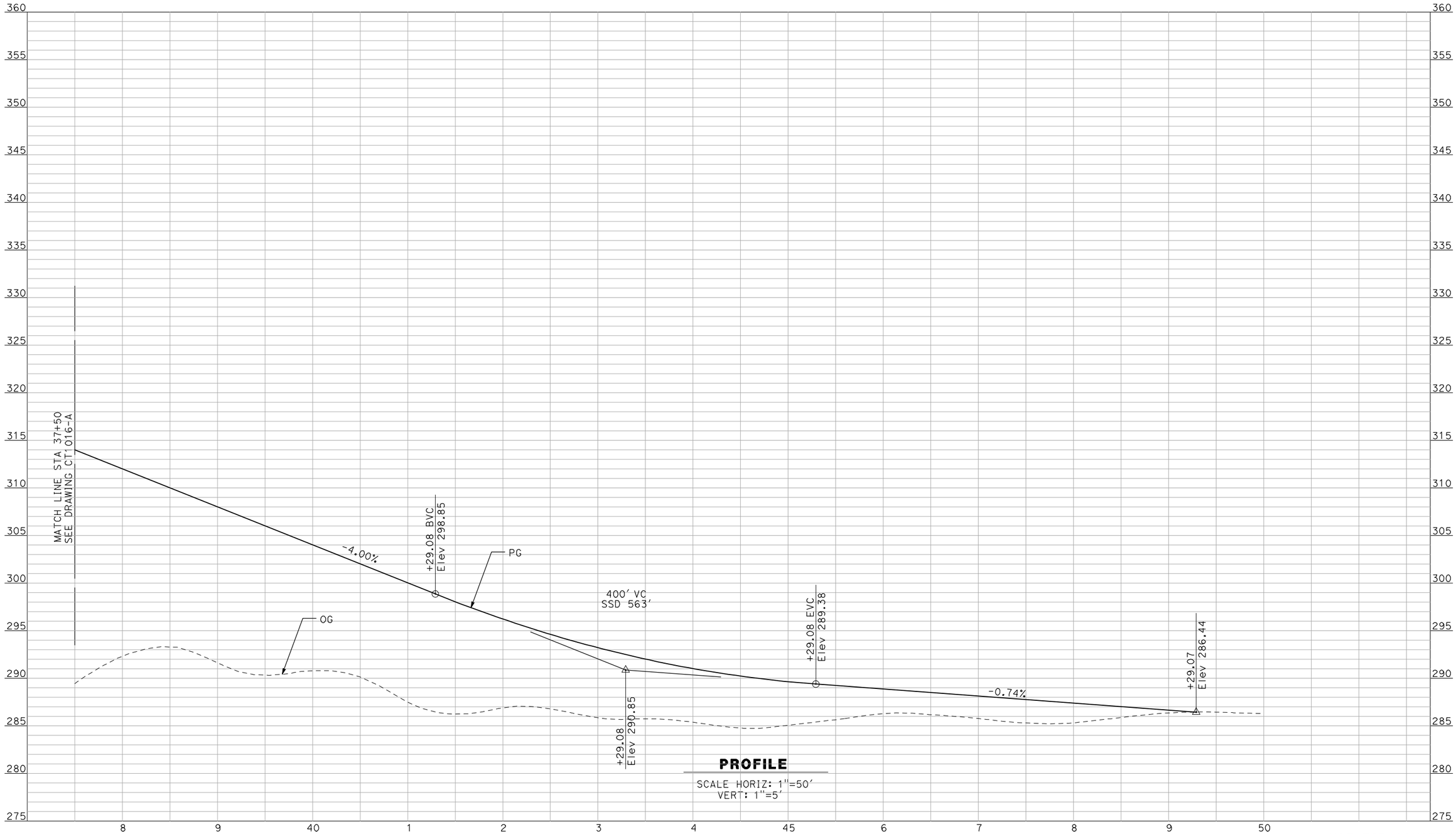

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
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DATE 06/30/2011

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 15
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1017-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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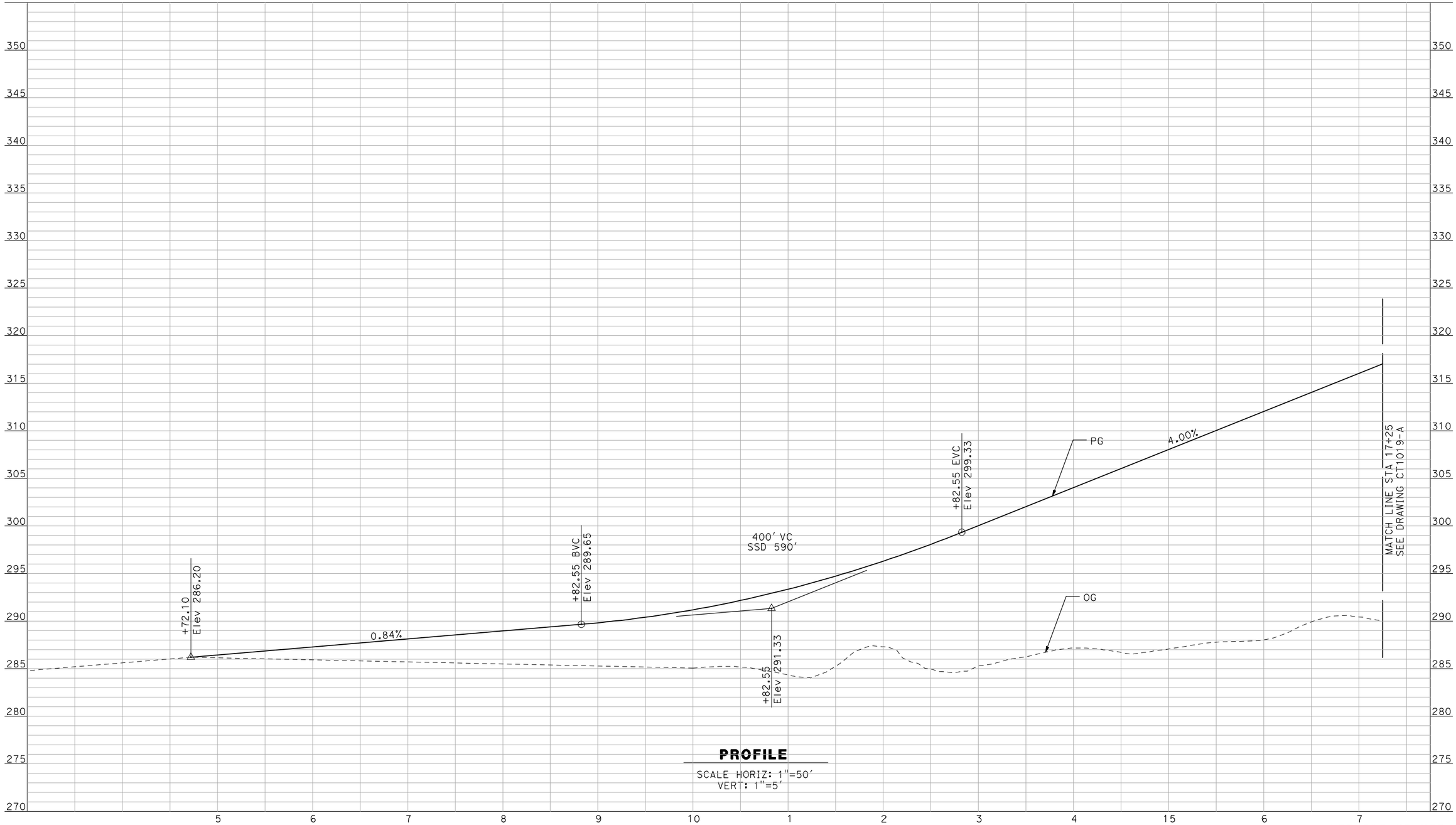

PROFILE

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MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 15 1/2
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1018-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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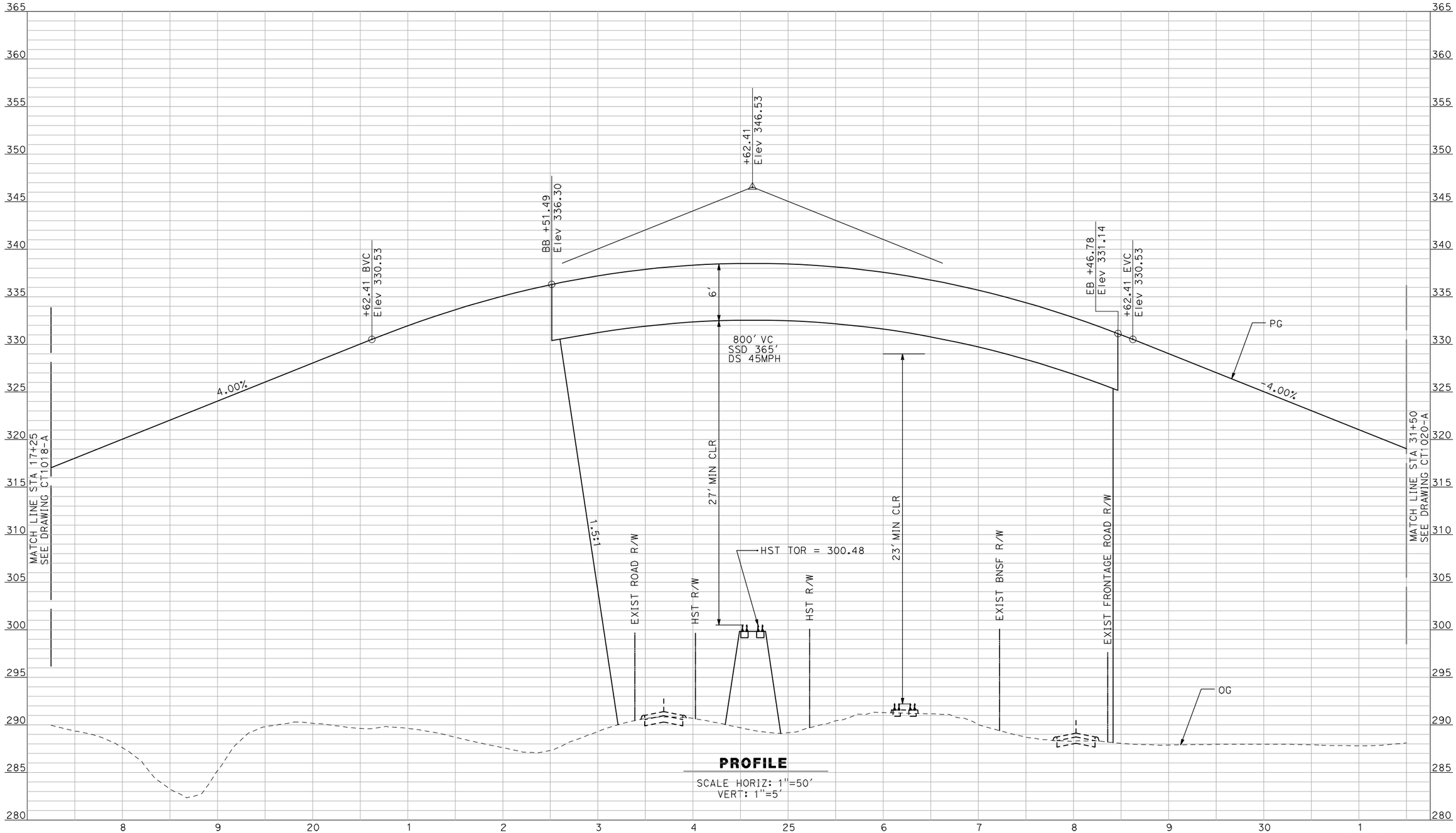

PROFILE

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MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 15 1/2
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1019-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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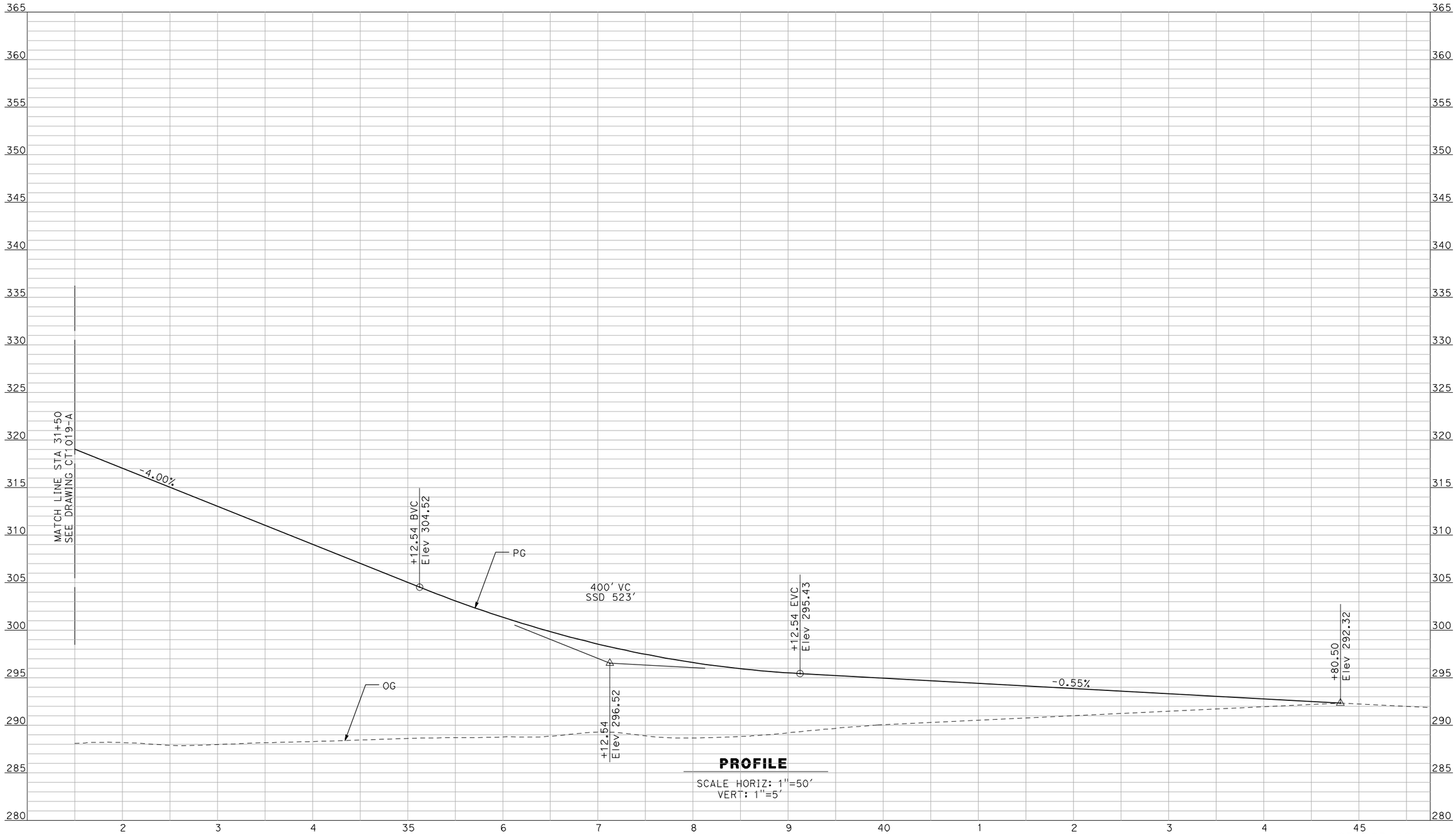

PROFILE

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MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 15 1/2
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1020-A
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SHEET NO. ### OF ###

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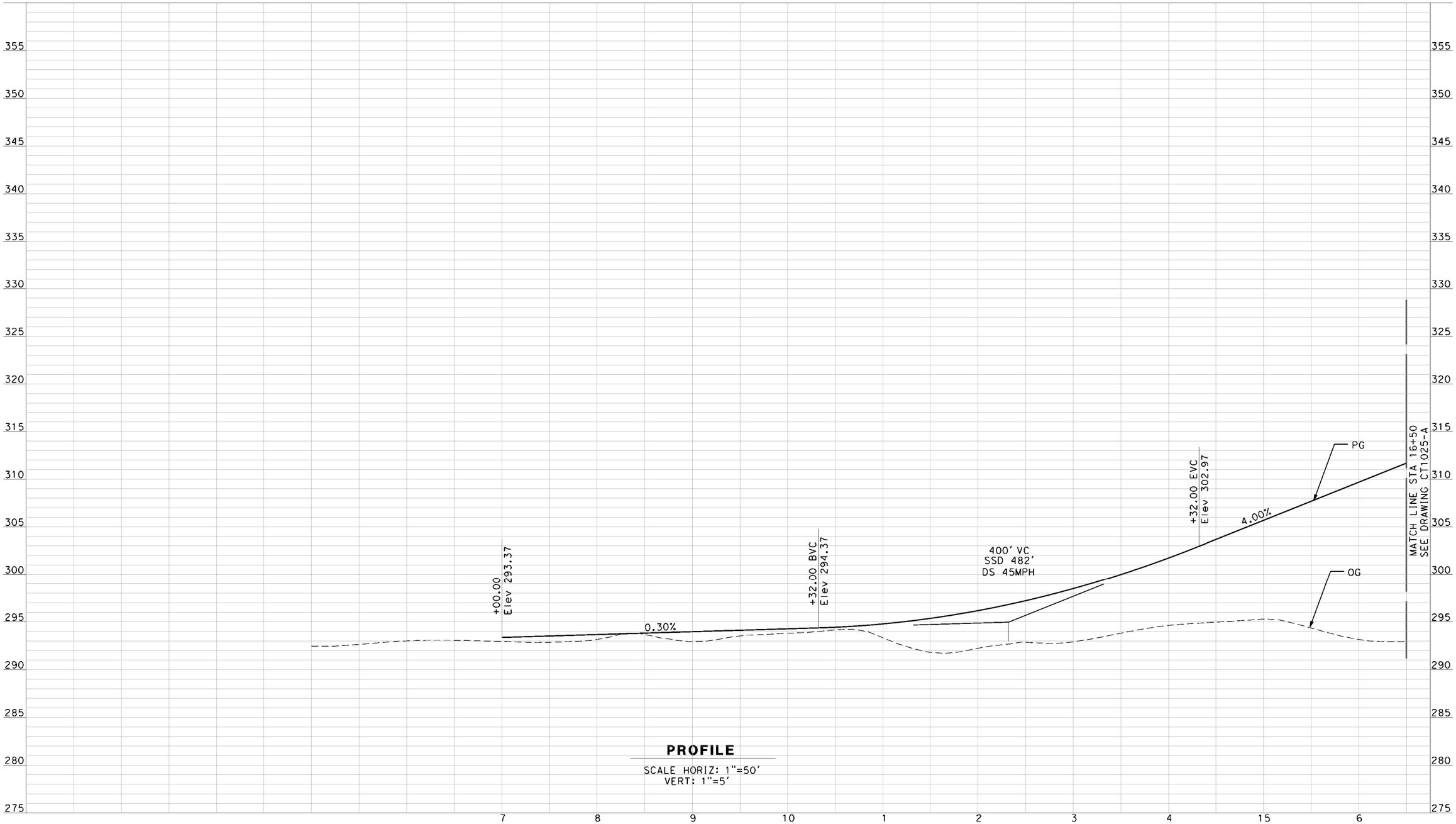

PROFILE

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MERCED TO FRESNO

HYBRID MAIN LINE - (AVE 21 WYE)
GRADE SEPARATION - AVENUE 17
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1024-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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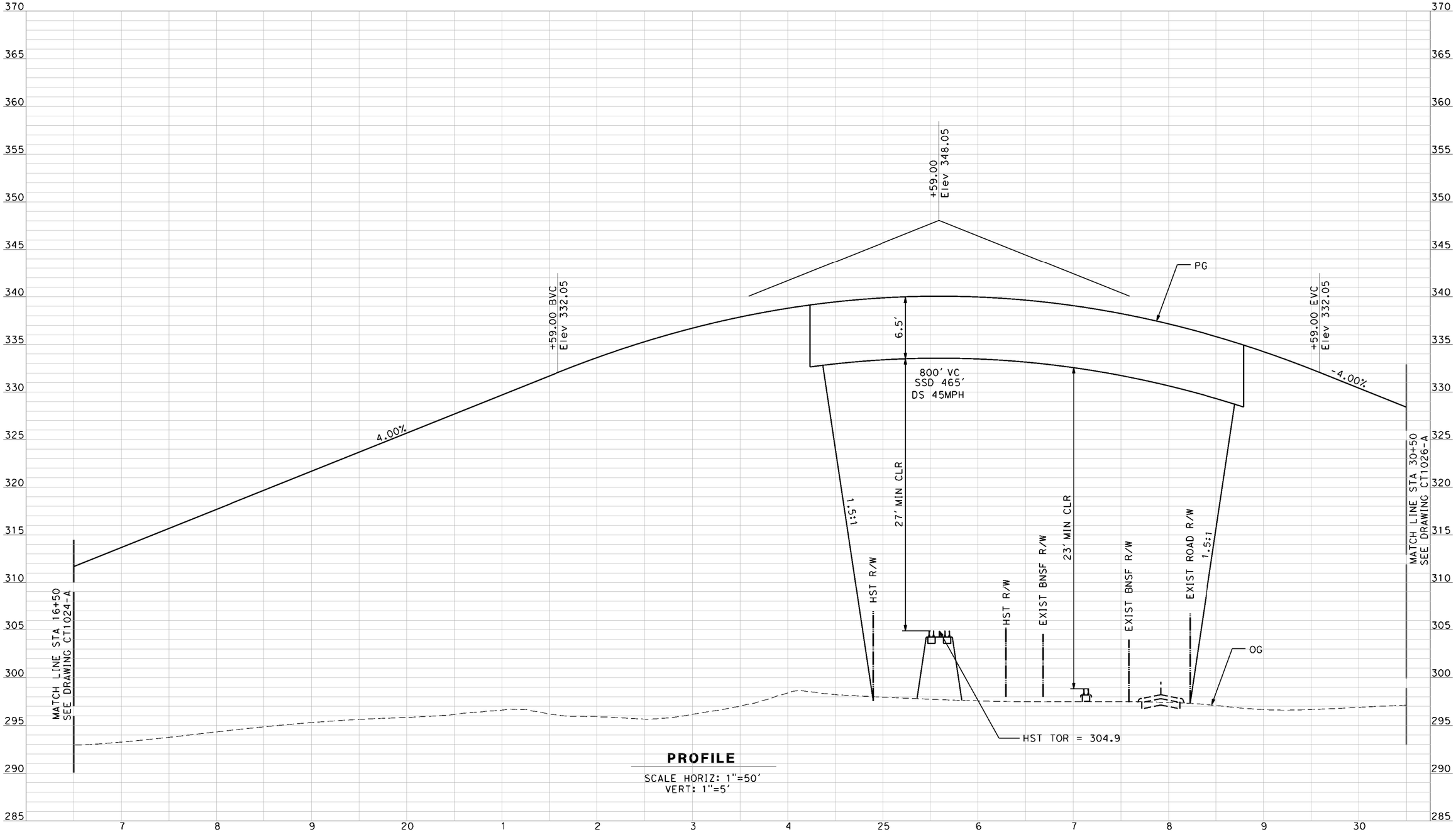

PROFILE

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO
HYBRID MAIN LINE - (AVE 21 WYE)
GRADE SEPARATION - AVENUE 17
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1025-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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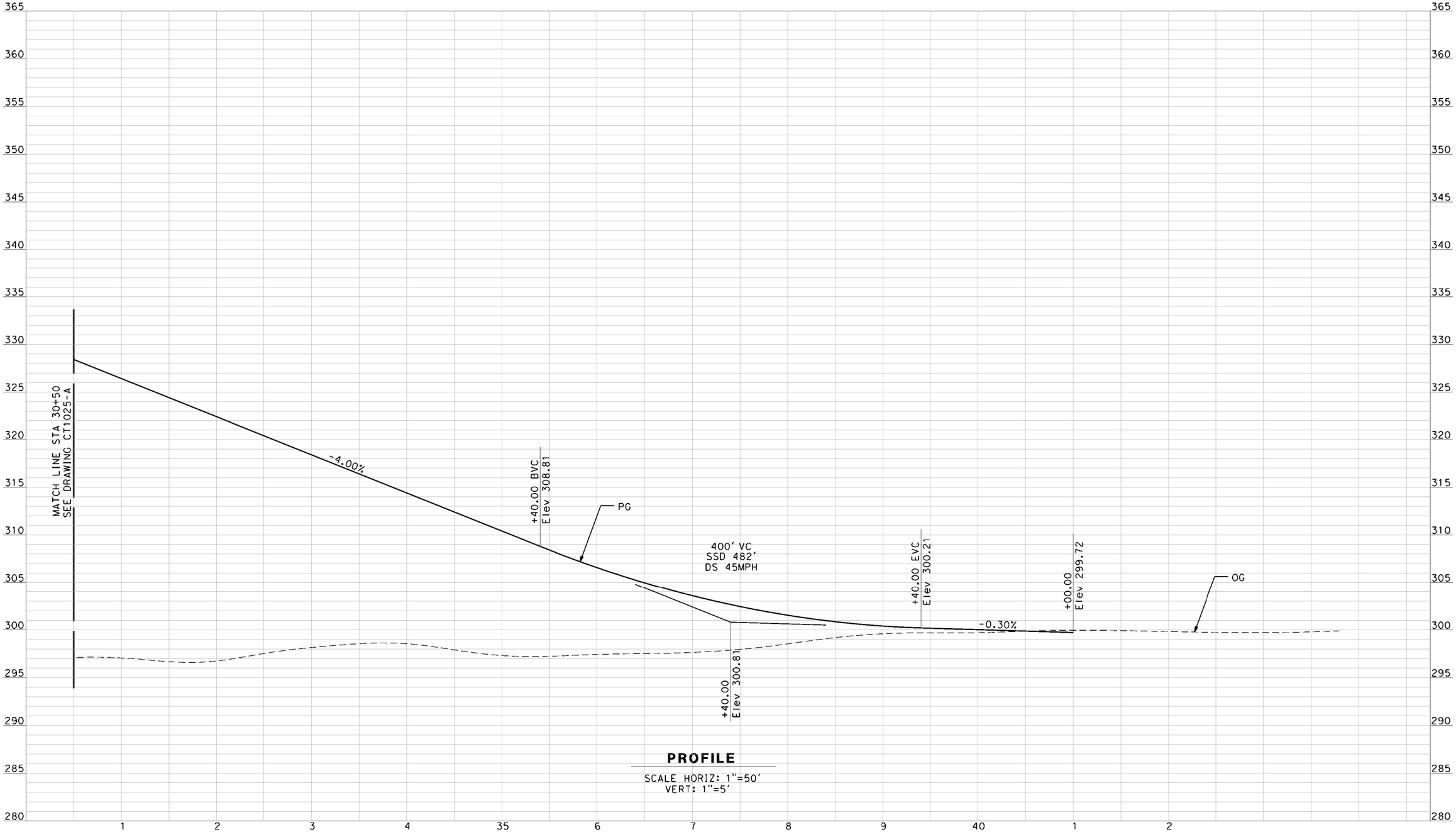

PROFILE

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID MAIN LINE - (AVE 21 WYE)
GRADE SEPARATION - AVENUE 17
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. ###
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SHEET NO. OF ###

CT1026-A

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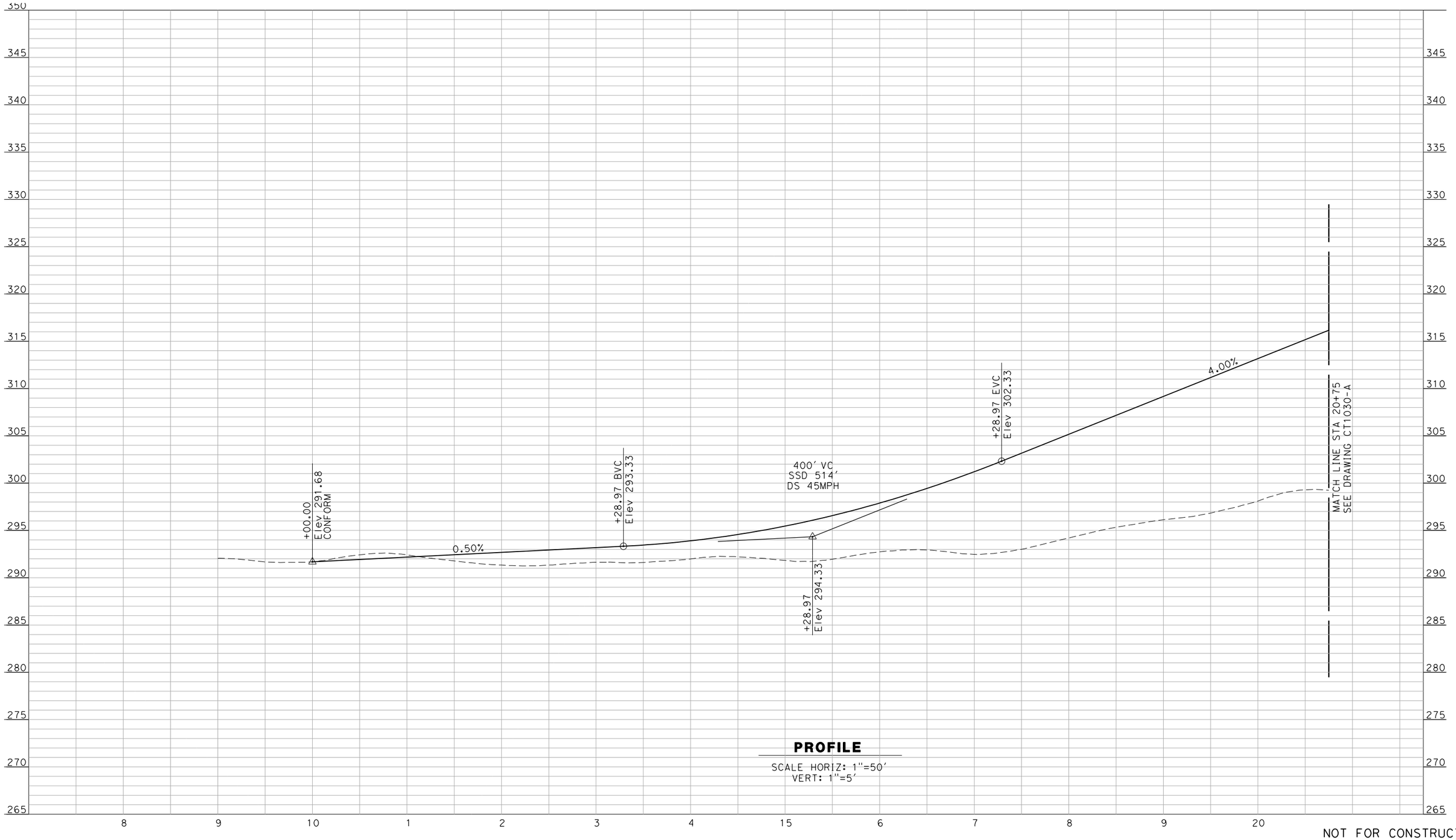

PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 27
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1029-A
SCALE AS SHOWN
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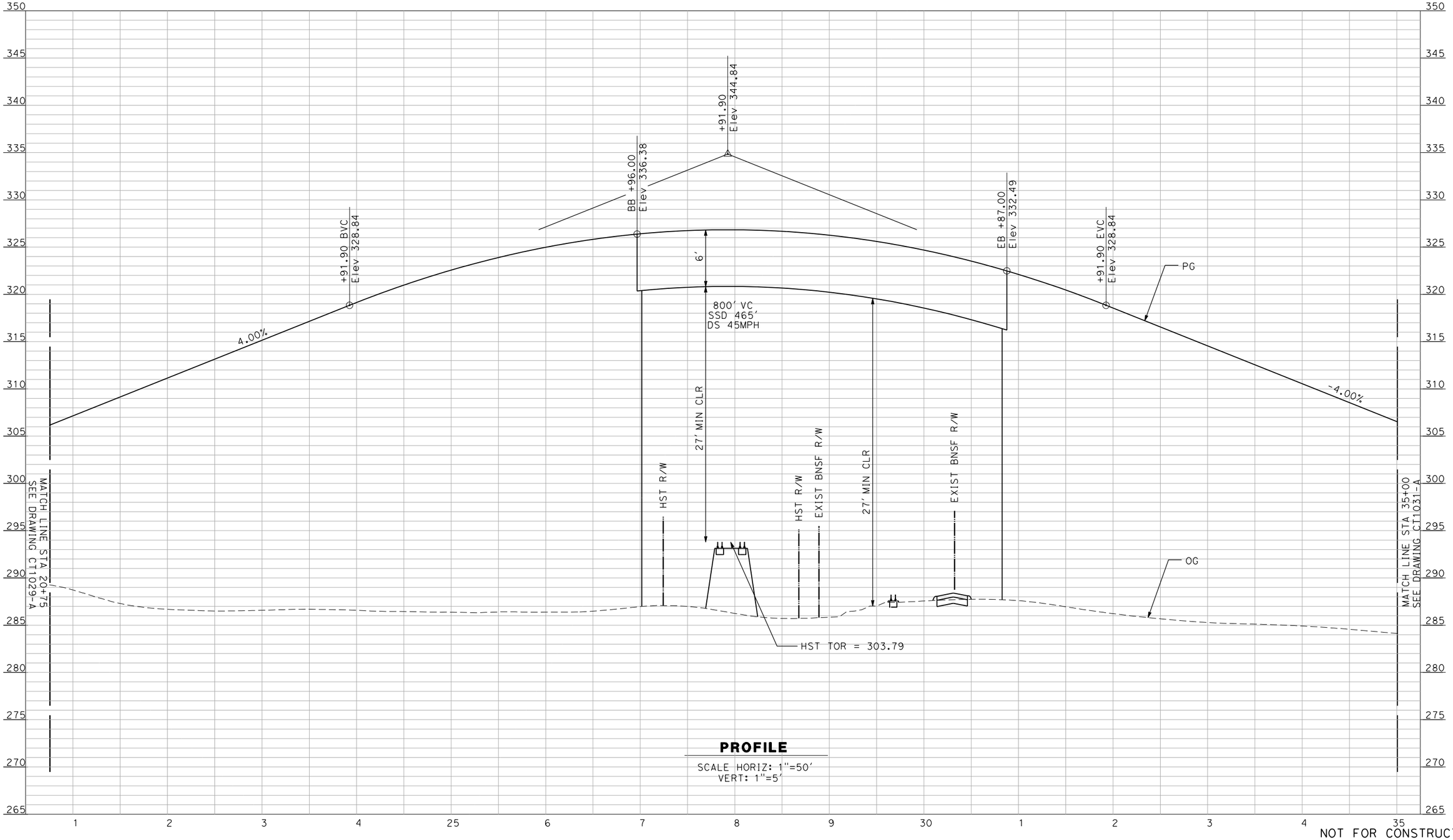

PROFILE

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 27
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1030-A
SCALE AS SHOWN
SHEET NO. OF ###

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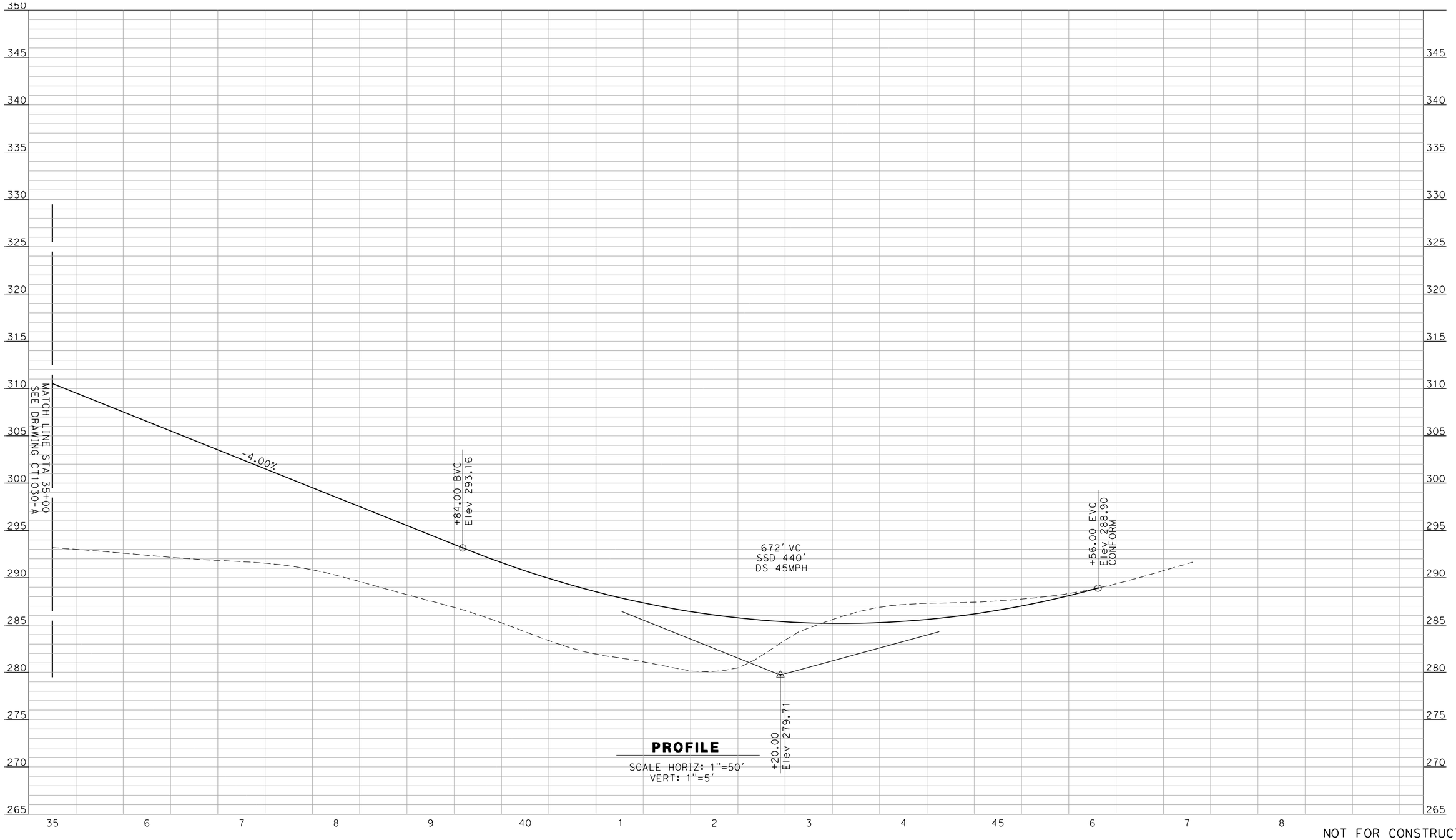

PROFILE

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VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 27
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1031-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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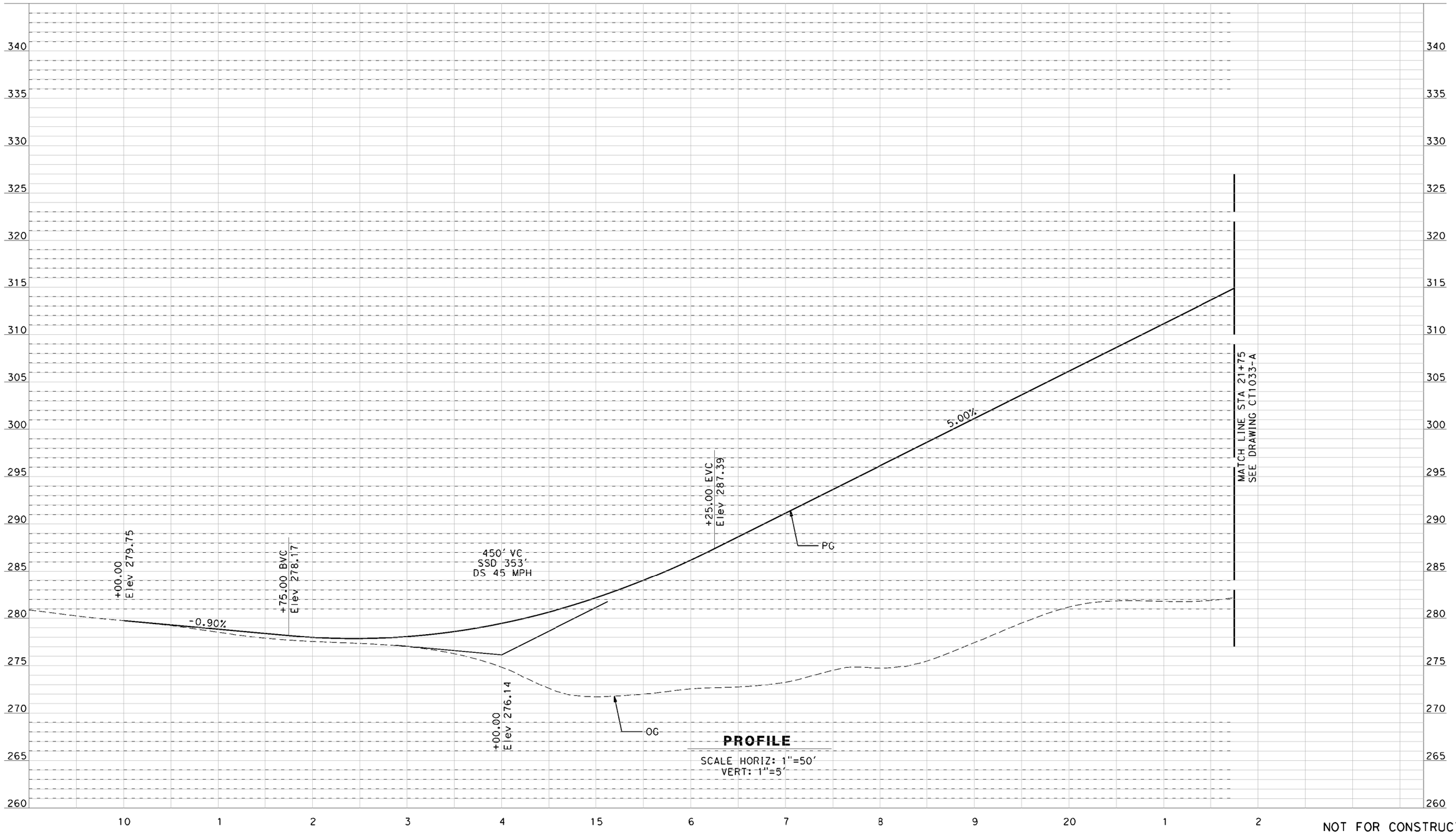

PROFILE

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VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID MAIN LINE (AVE 21 WYE)
GRADE SEPARATION - ROAD 26
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1032-A
SCALE AS SHOWN
SHEET NO. OF ###

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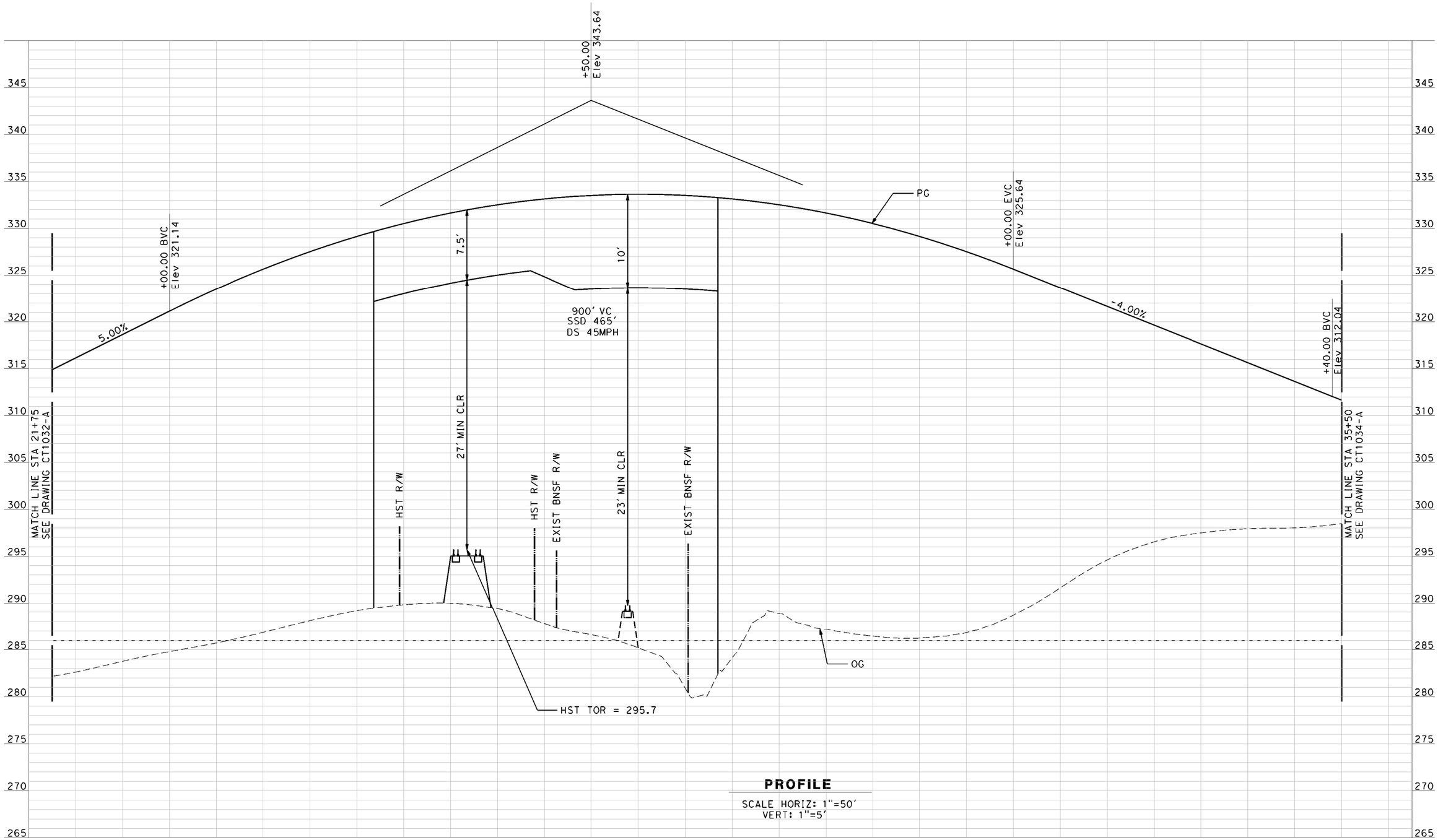

PROFILE

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID MAIN LINE - (AVE 21 WYE)
GRADE SEPARATION - ROAD 26
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1033-A
SCALE AS SHOWN
SHEET NO. OF ###

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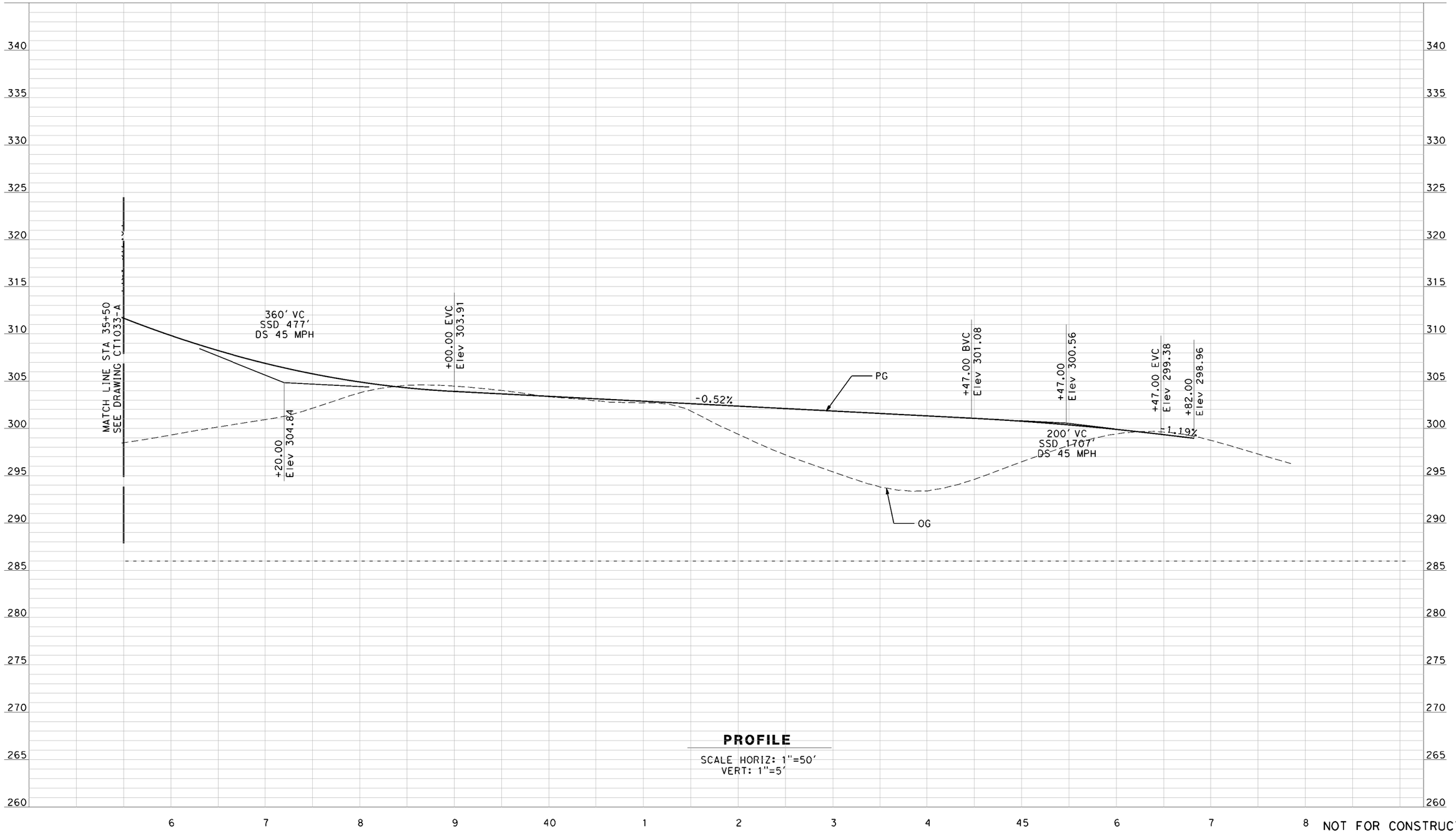

PROFILE

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID MAIN LINE (AVE 21 WYE)
GRADE SEPARATION - ROAD 26
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
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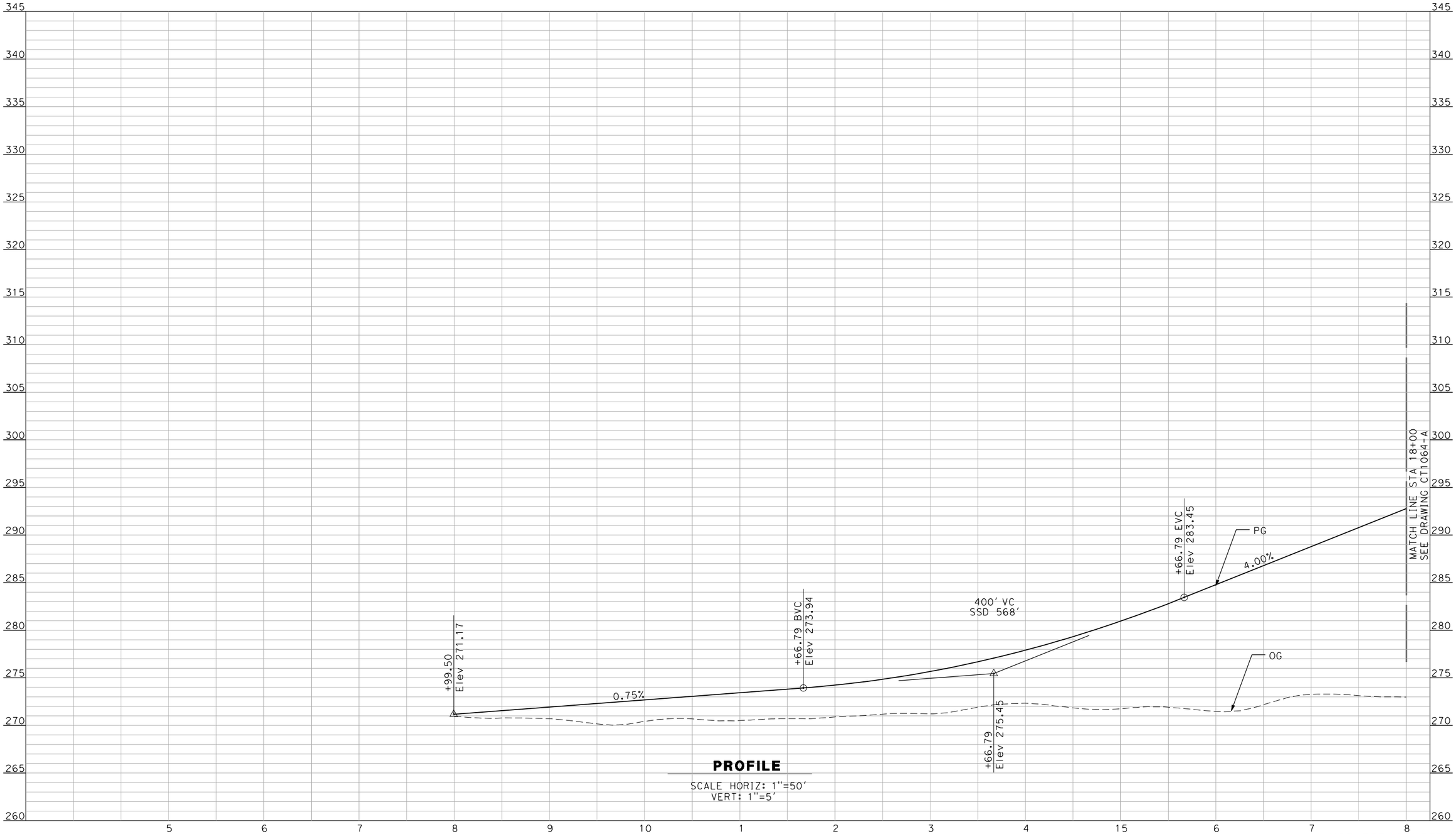

PROFILE

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 20
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
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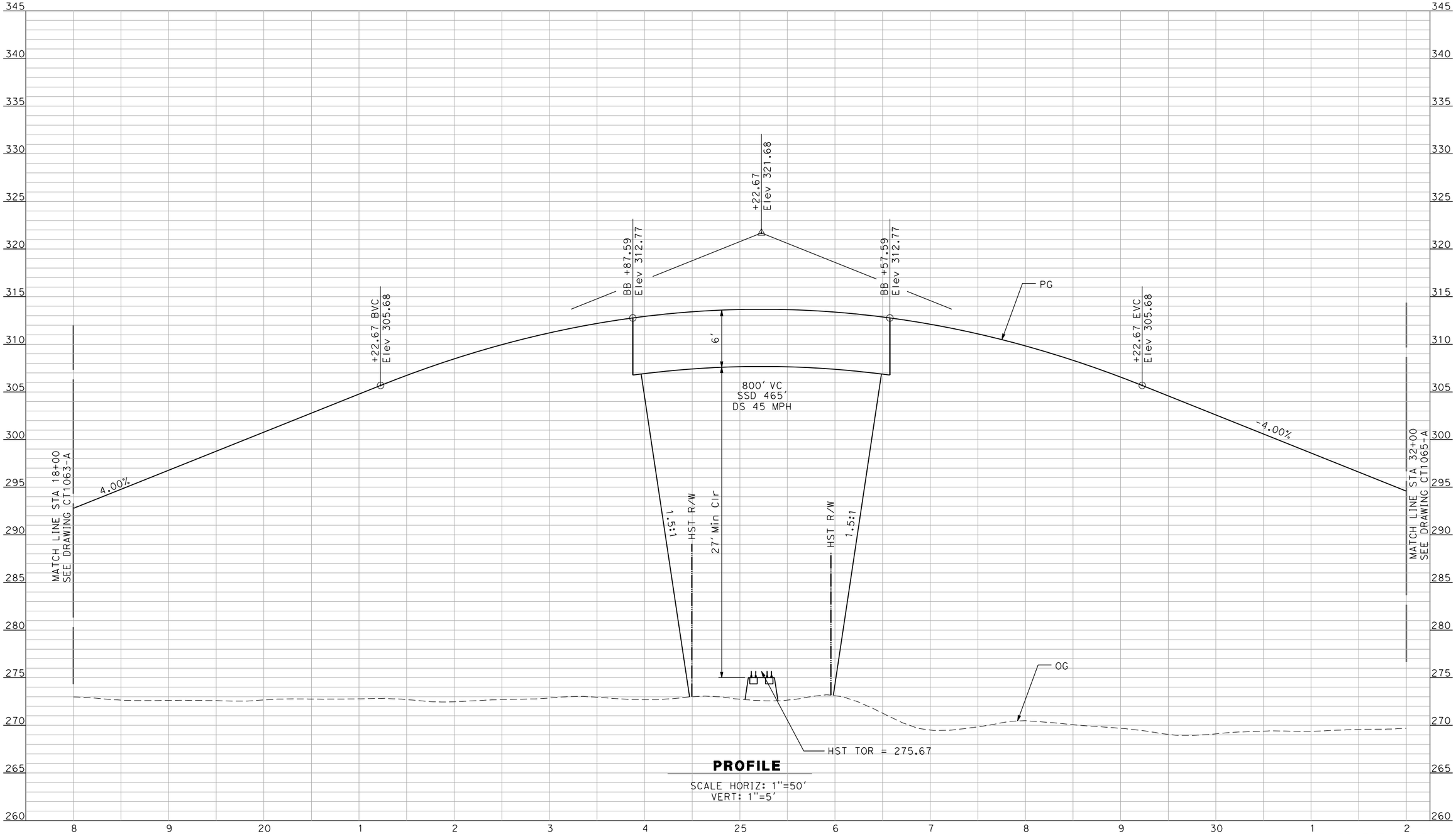

PROFILE

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 20
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
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SHEET NO. ### OF ###

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PROFILE

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 20
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1065-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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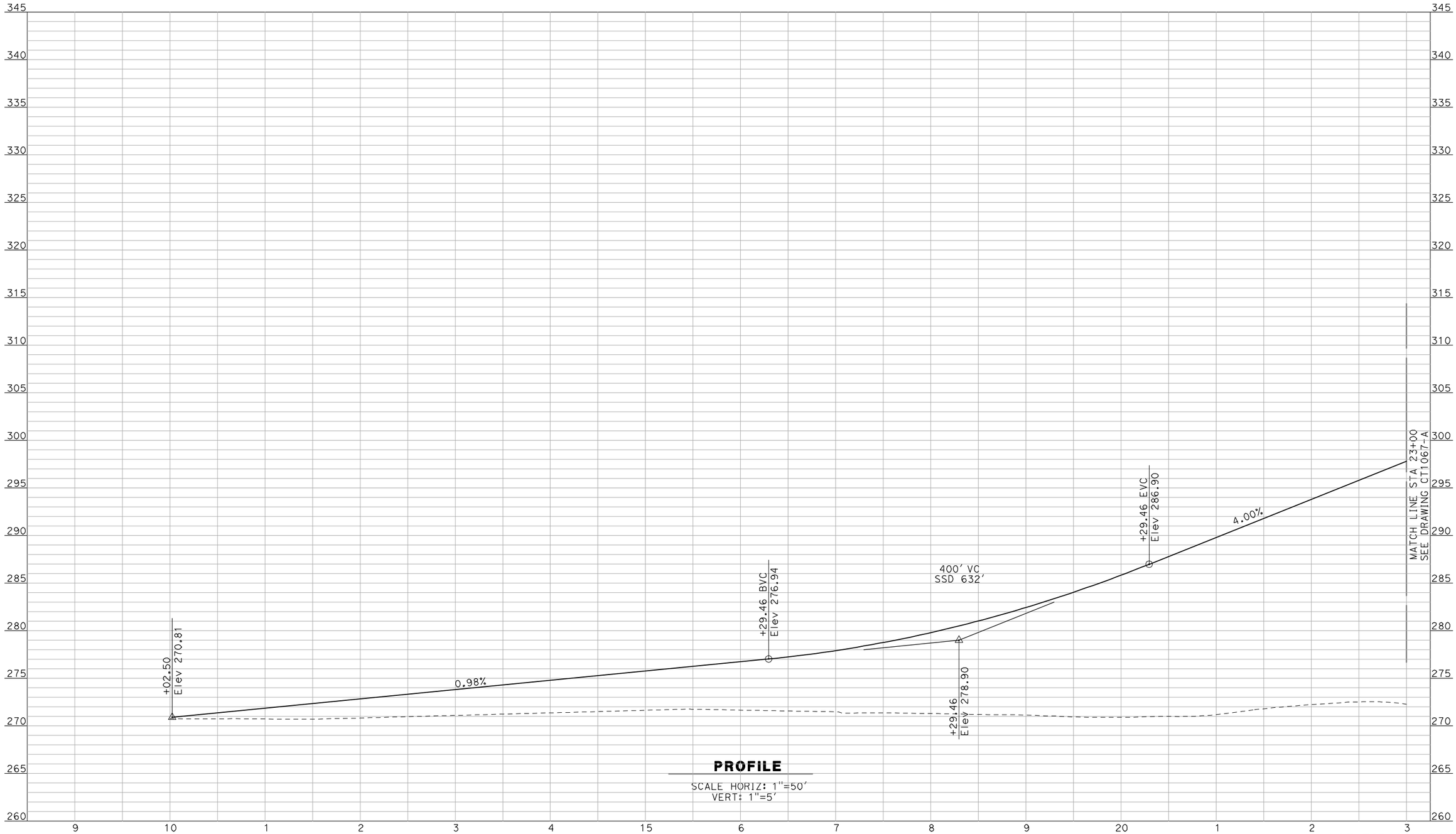

PROFILE

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 20 1/2
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1066-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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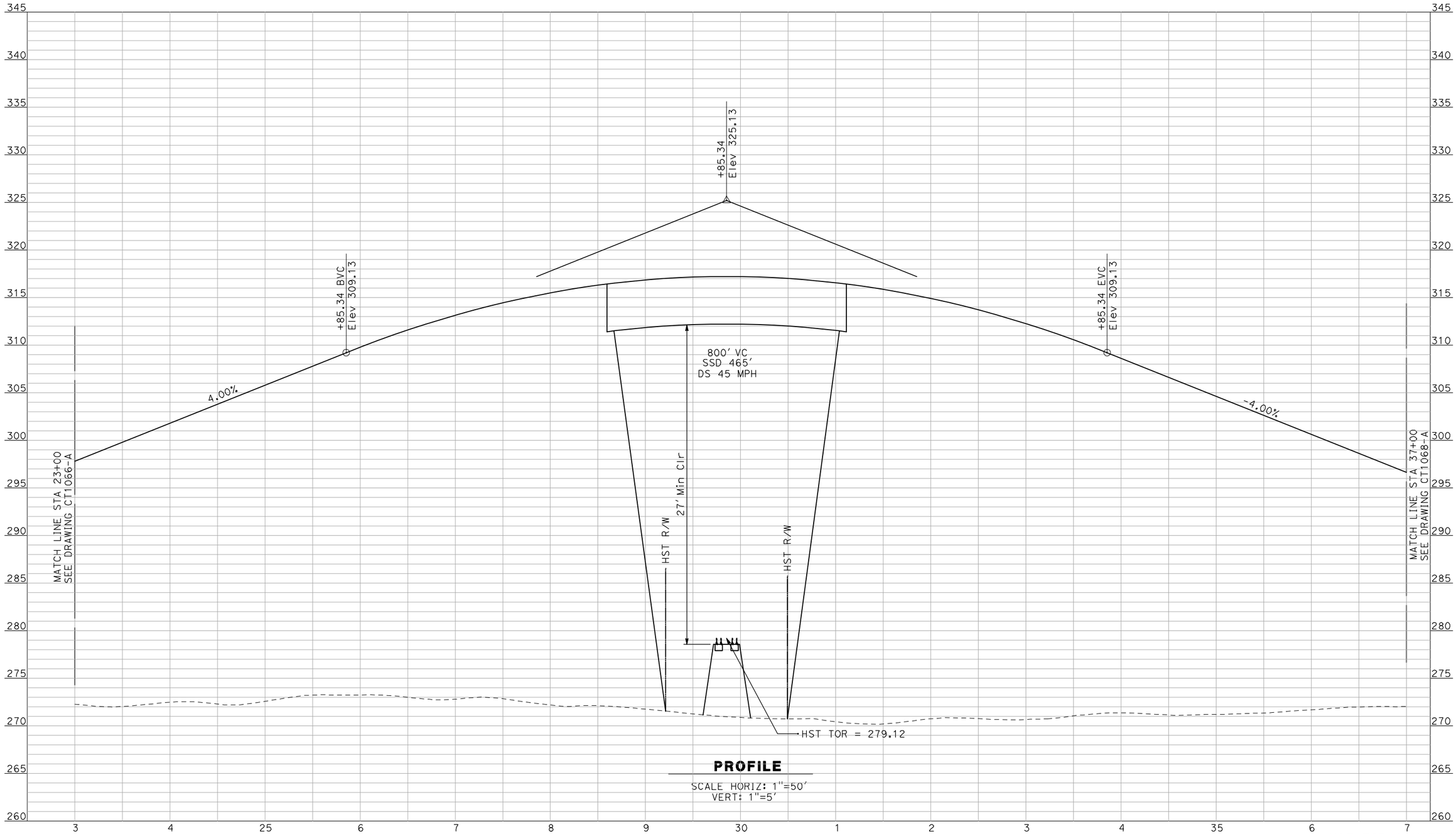

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

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CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 20 1/2
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1067-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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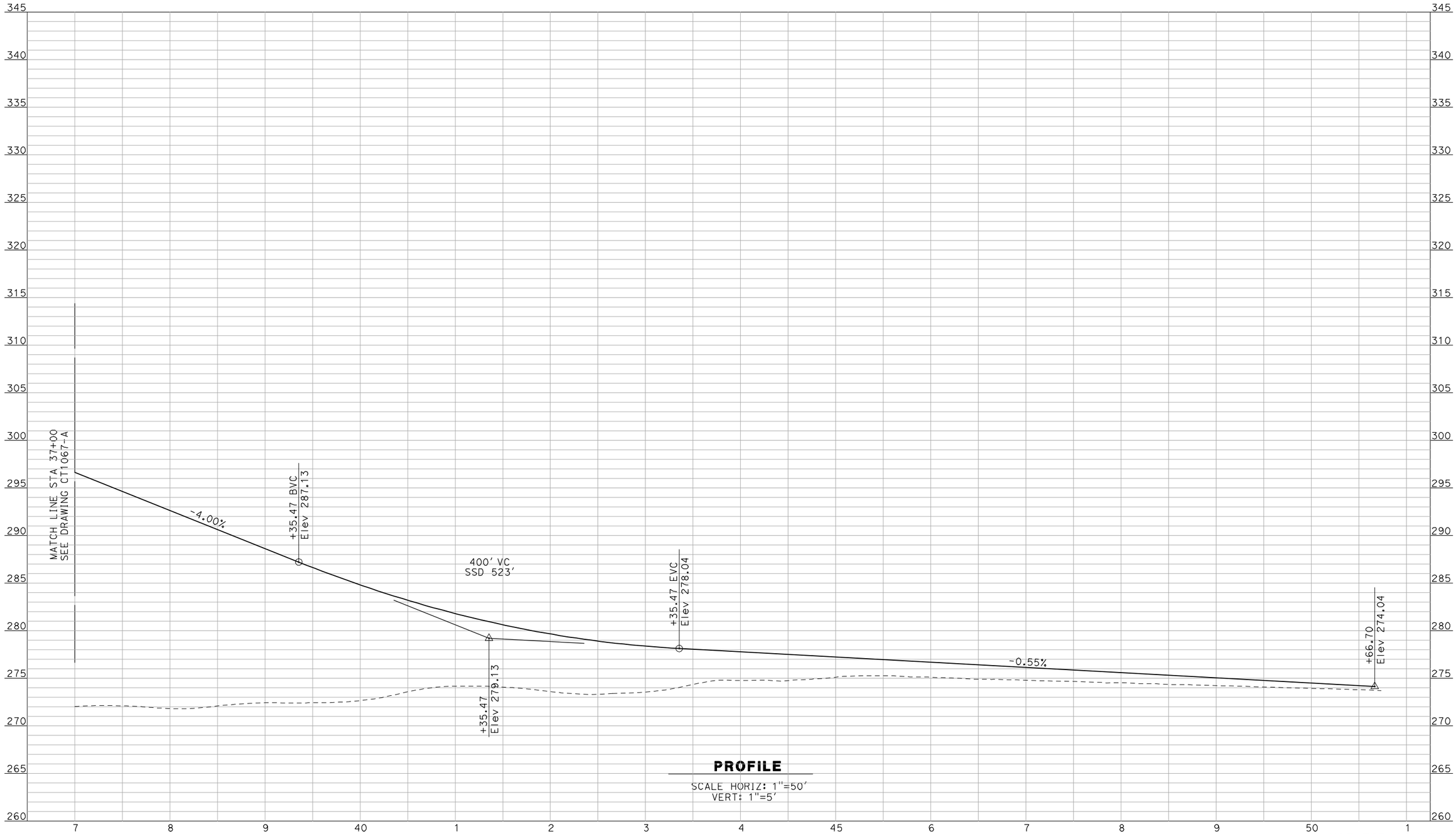
GibsonR1



PROFILE

SCALE HORIZ: 1"=50'
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REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 20 1/2
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1068-A
SCALE AS SHOWN
SHEET NO. OF ###

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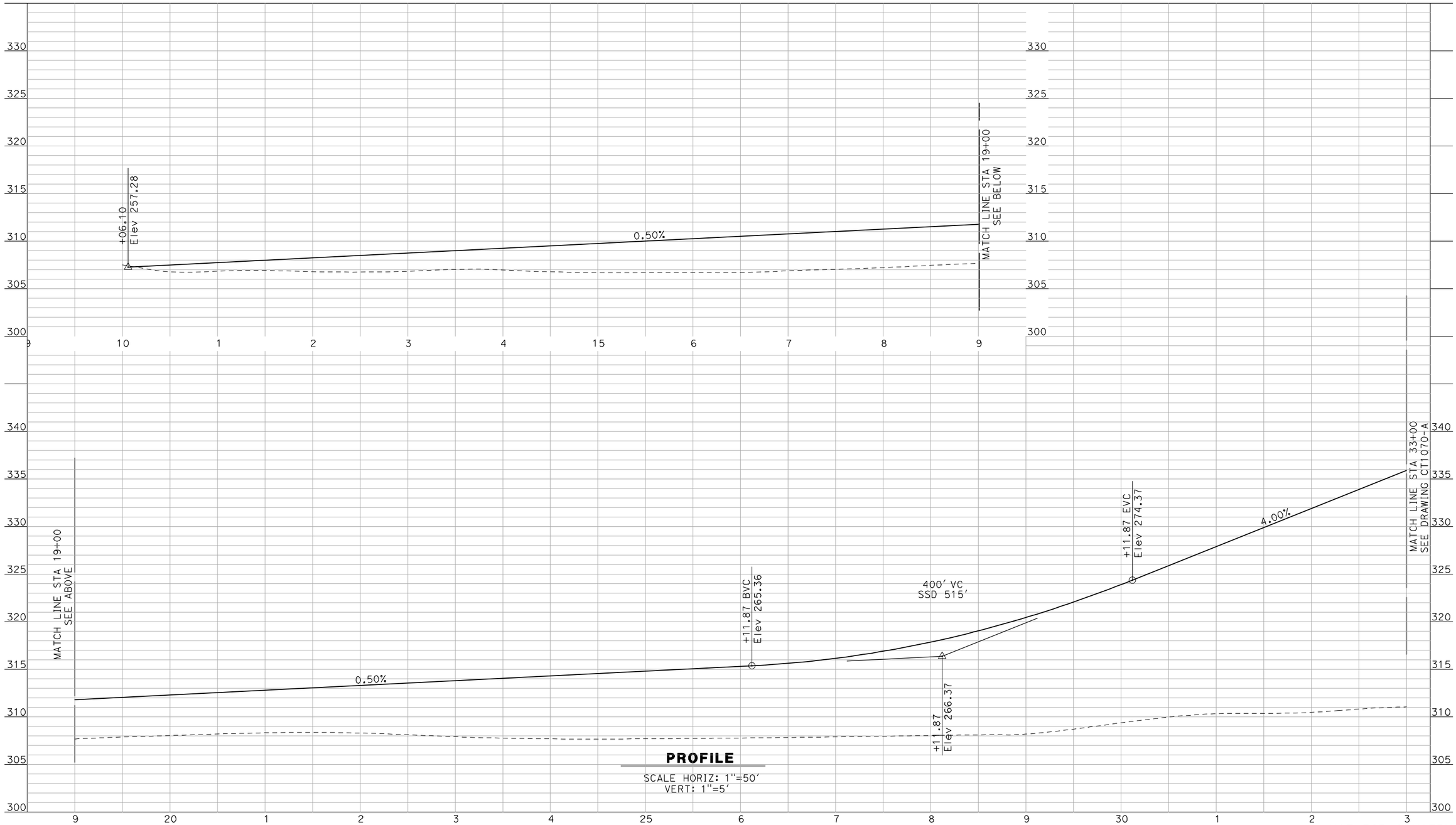

PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 22
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1069-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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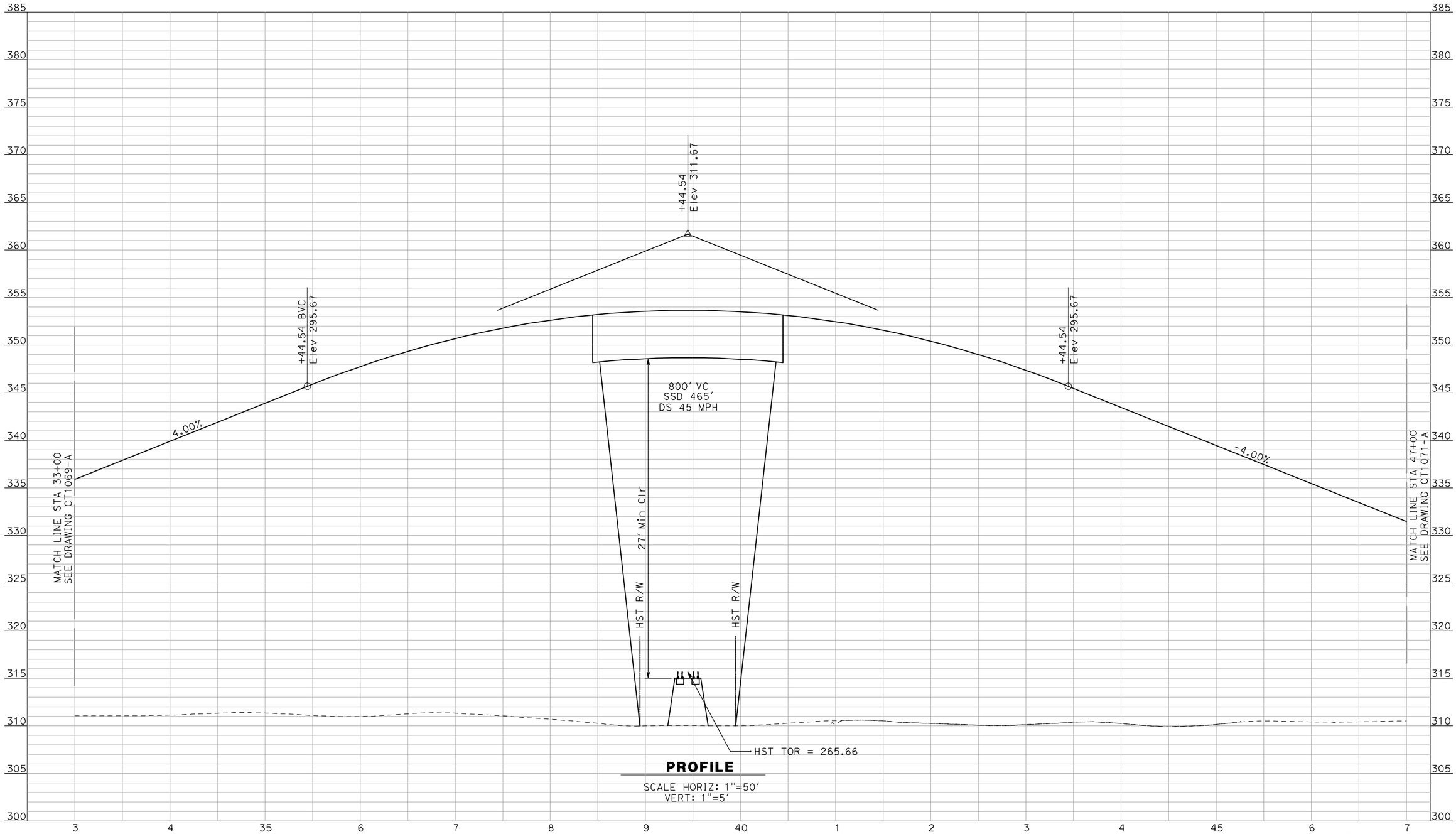

PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 22
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1070-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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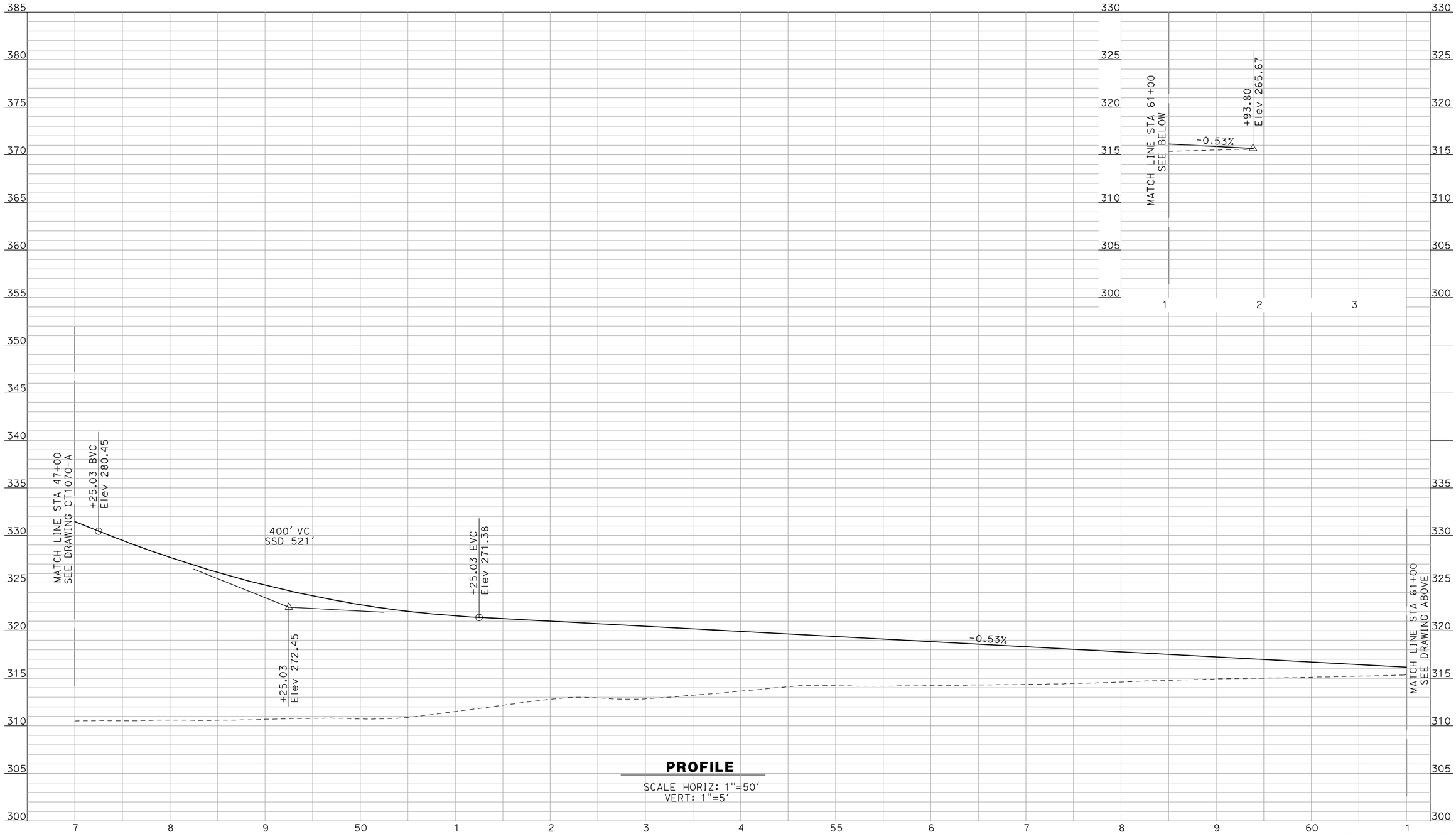

PROFILE

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VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 22
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1071-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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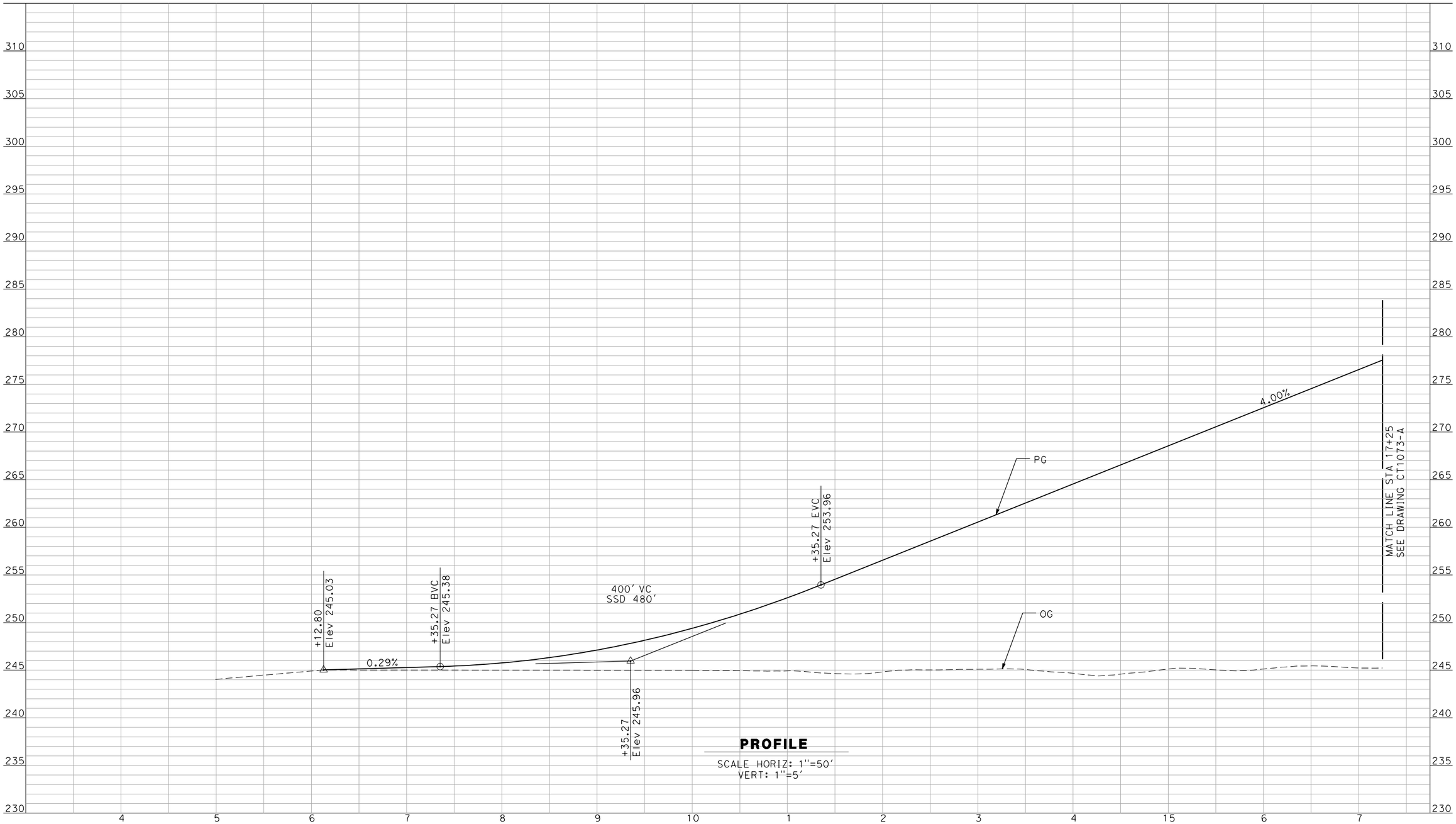

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - AVE 21 WYE
GRADE SEPARATION - ROAD 20
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1072-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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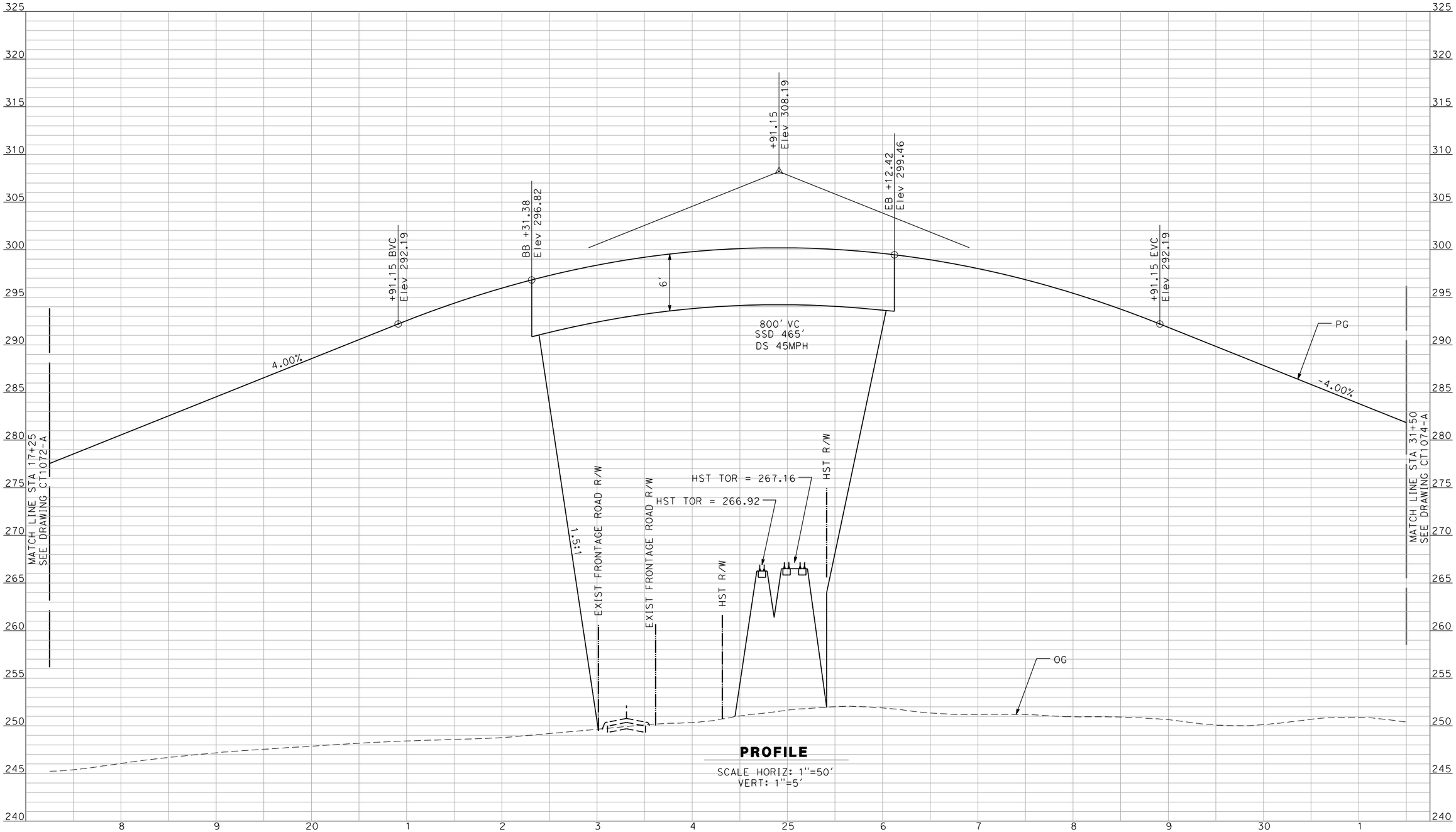

PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - AVE 21 WYE
GRADE SEPARATION - ROAD 20
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1073-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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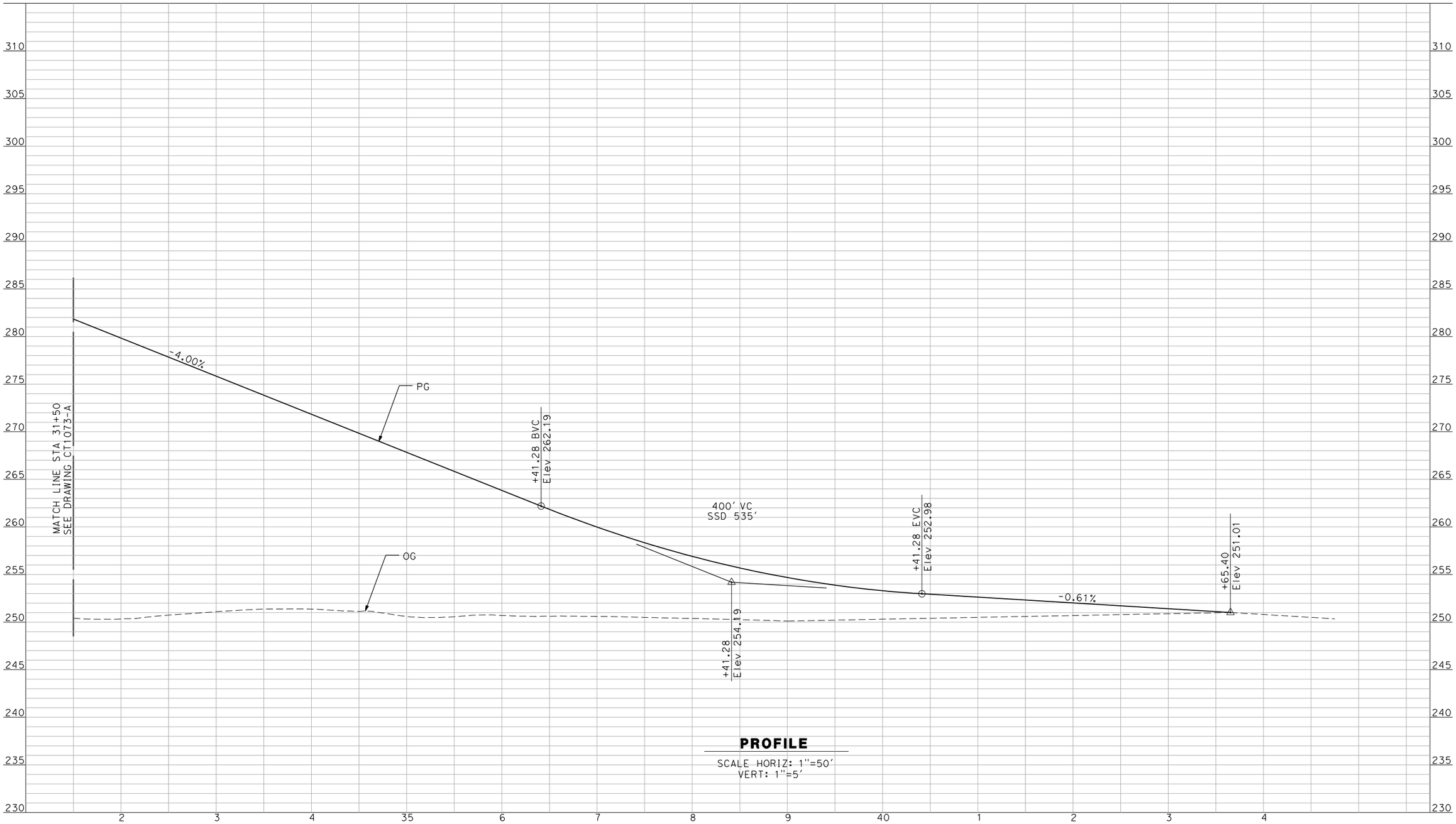

PROFILE

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - AVE 21 WYE
GRADE SEPARATION - ROAD 20
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1074-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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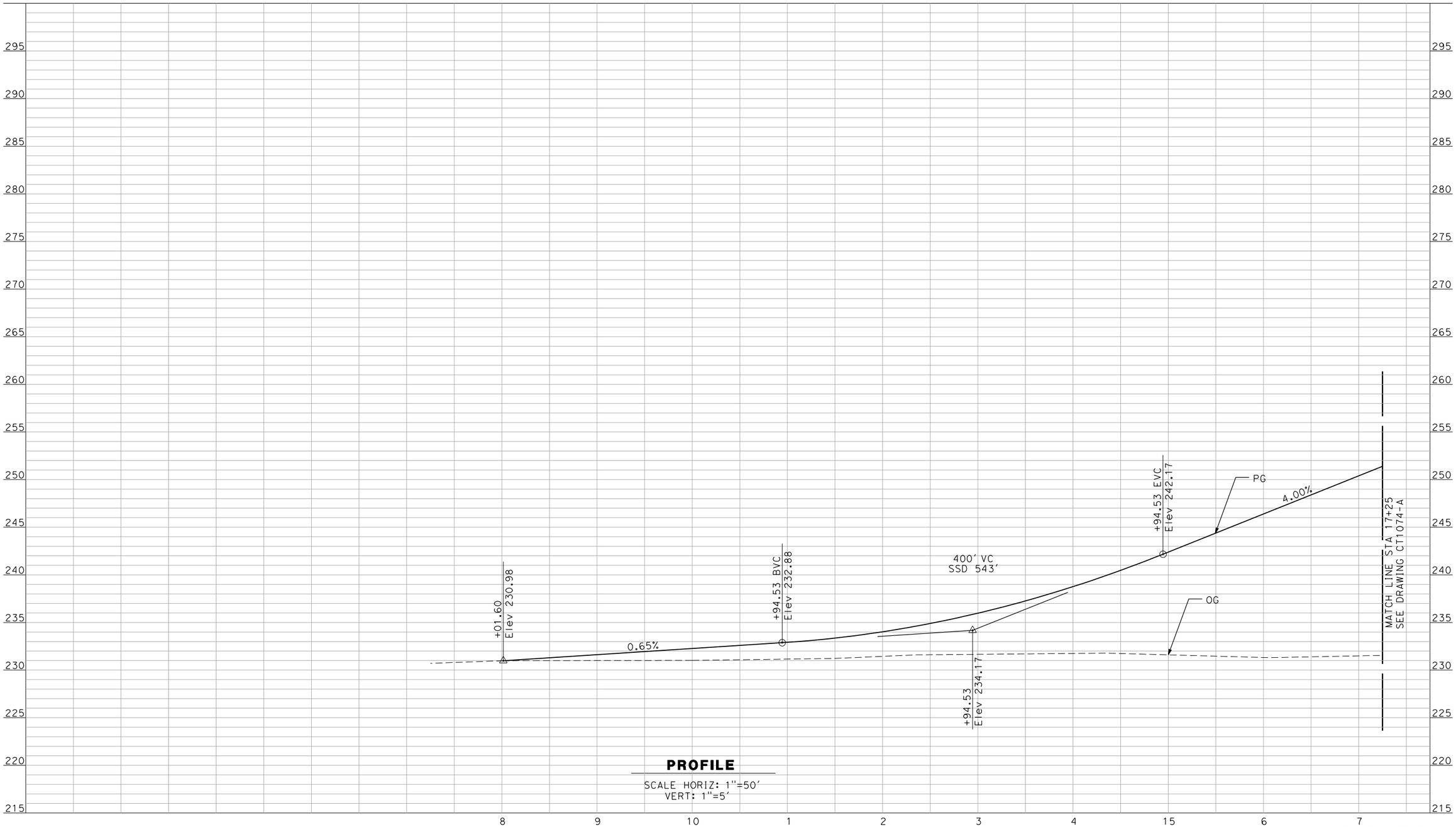

PROFILE

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO
BNSF MAIN LINE - AVE 21 WYE
GRADE SEPARATION - ROAD 18 1/2
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1075-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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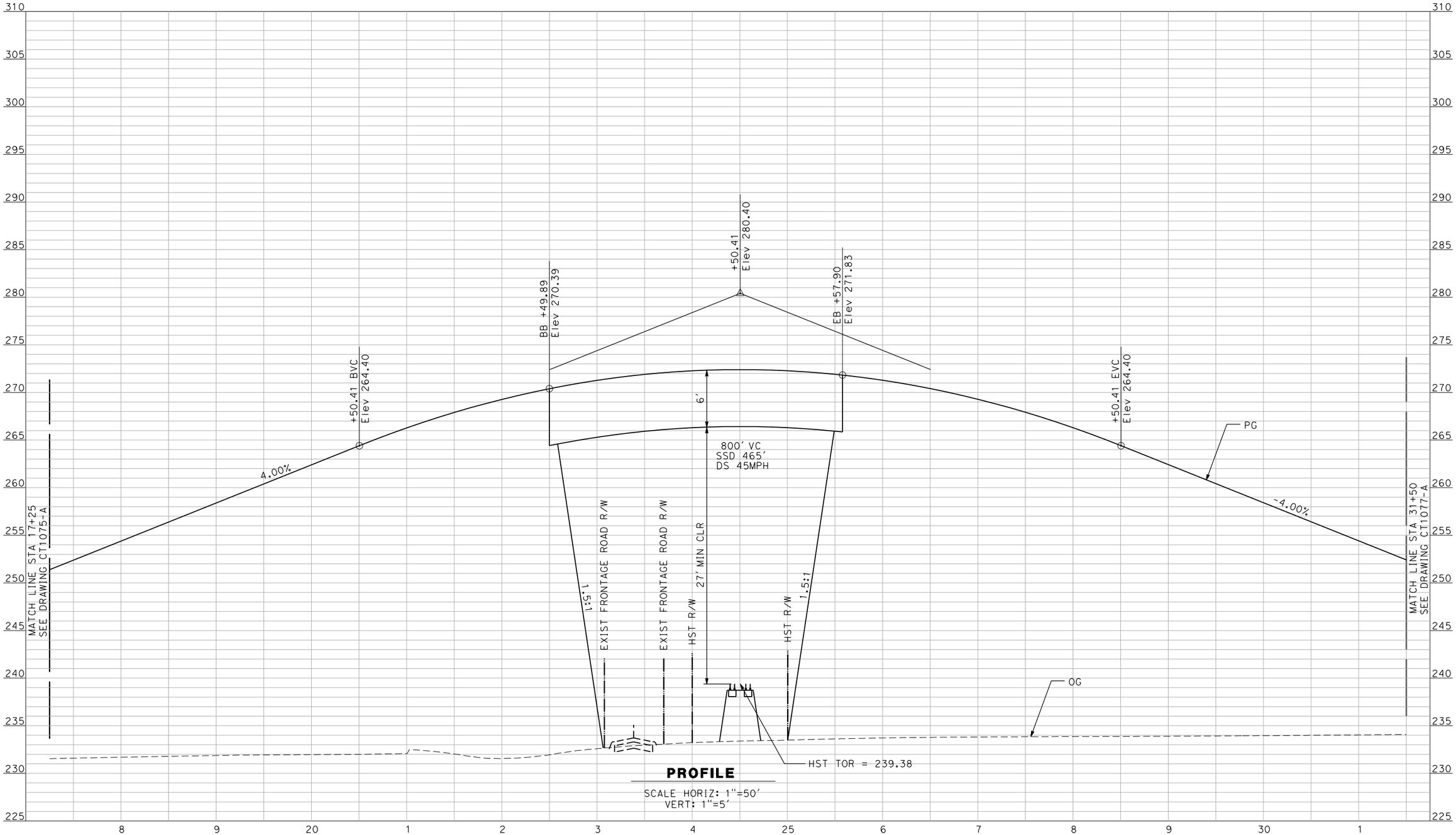

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - AVE 21 WYE
GRADE SEPARATION - ROAD 18 1/2
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1076-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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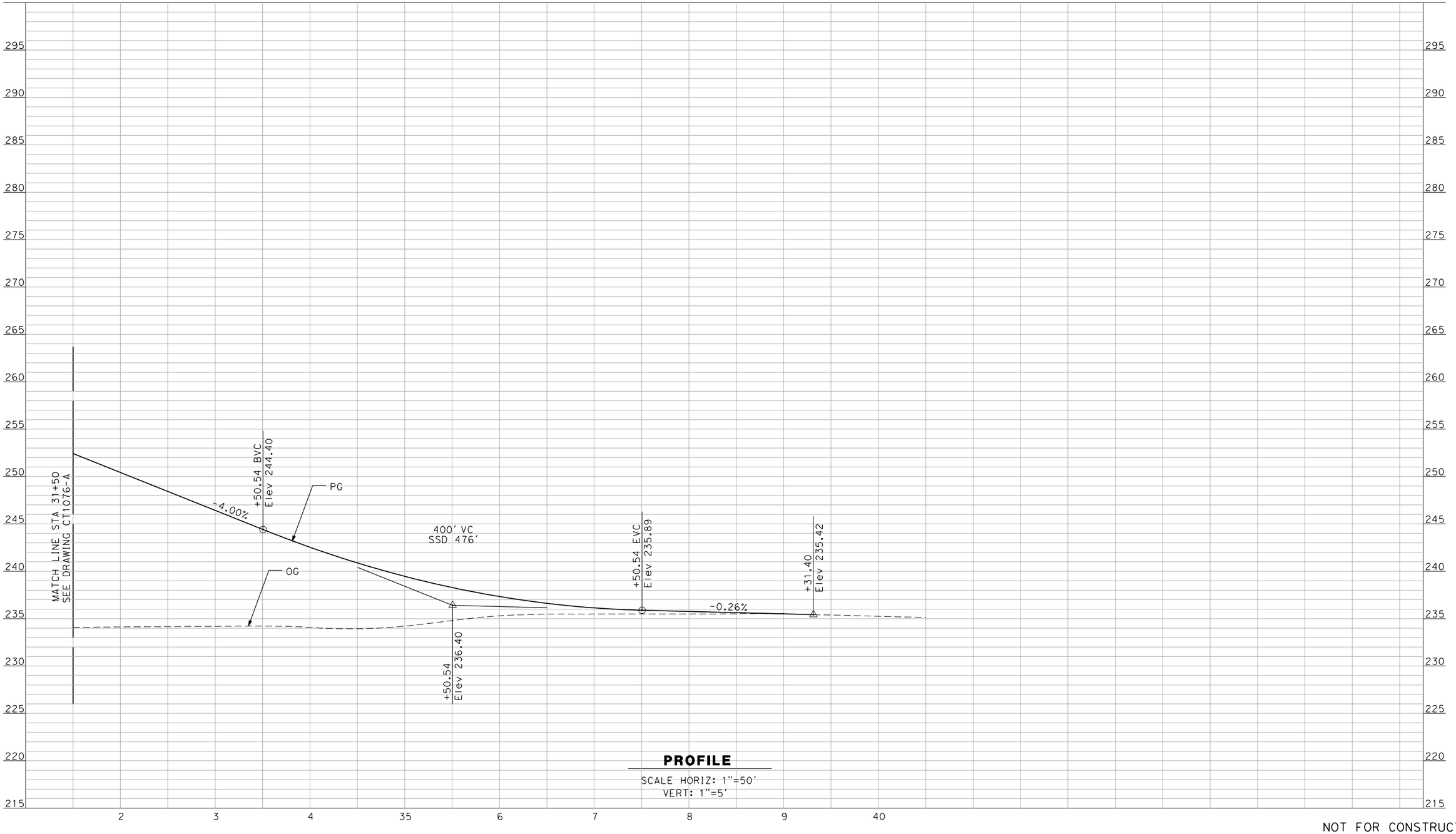

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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DATE 06/30/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - AVE 21 WYE
GRADE SEPARATION - ROAD 18 1/2
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1077-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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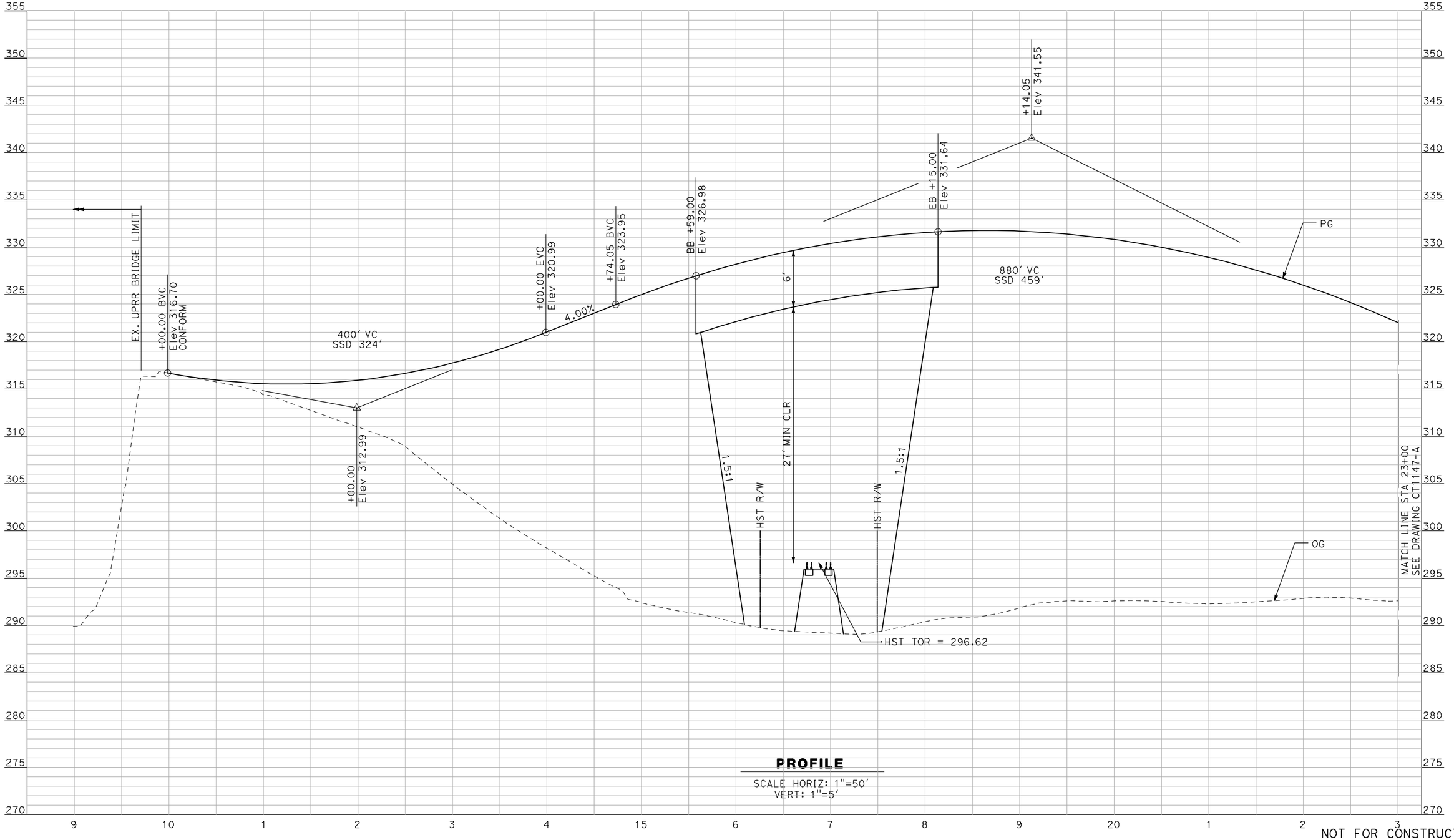

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 7
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1146-A
SCALE AS SHOWN
SHEET NO. OF ###

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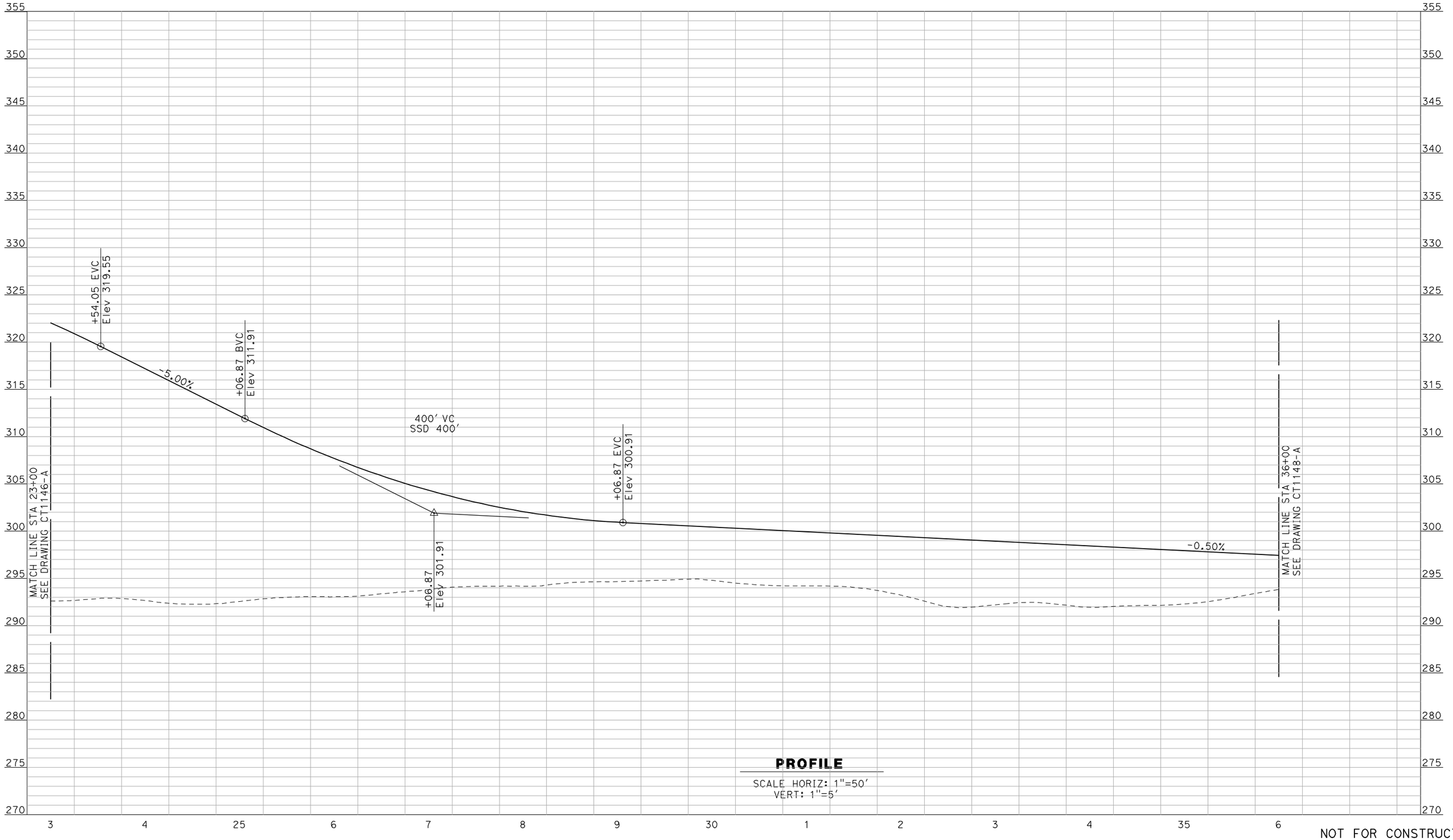

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
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DATE 06/30/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 7
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1147-A
SCALE AS SHOWN
SHEET NO. OF ###

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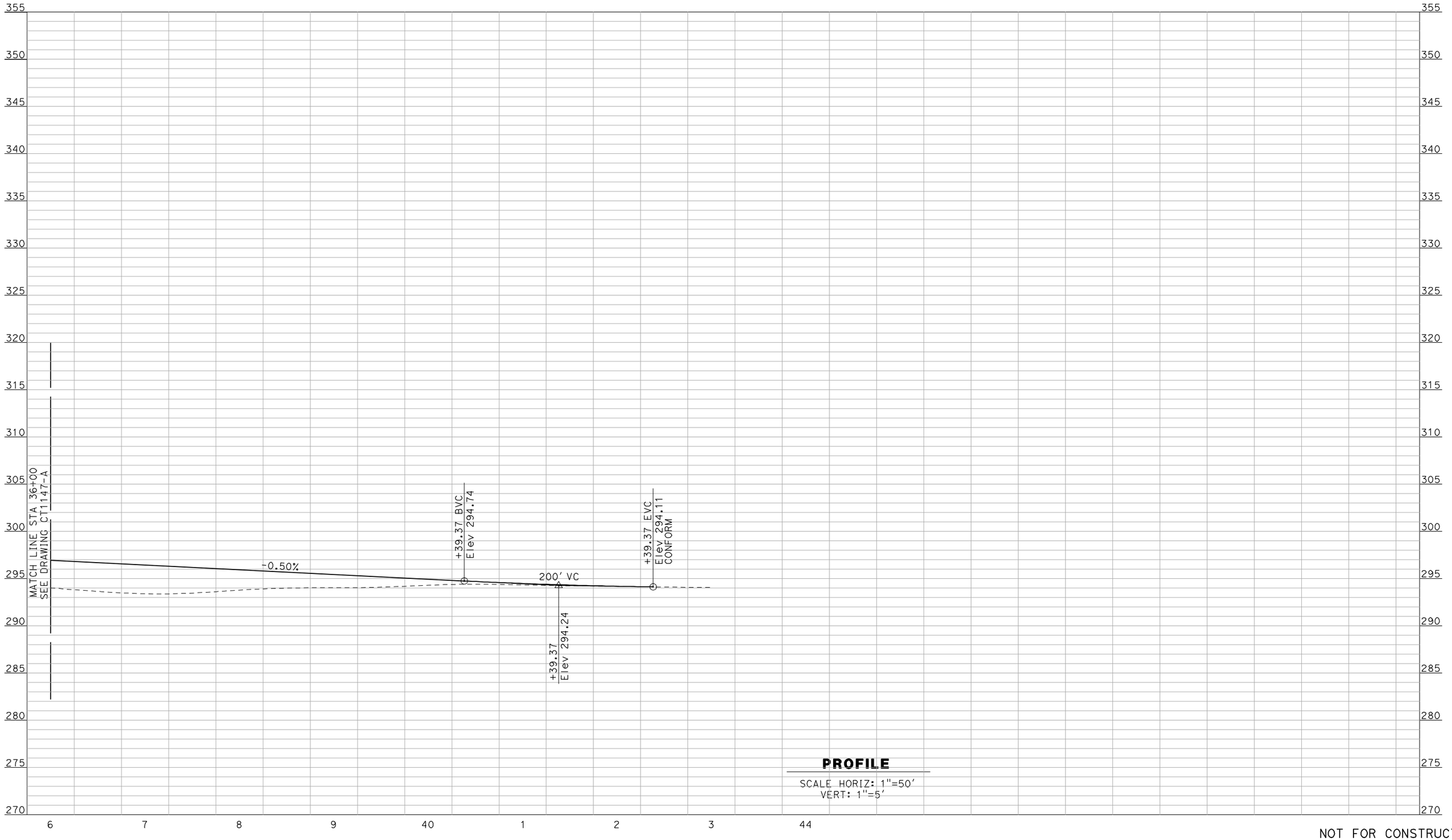

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

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DATE 06/30/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 7
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1148-A
SCALE AS SHOWN
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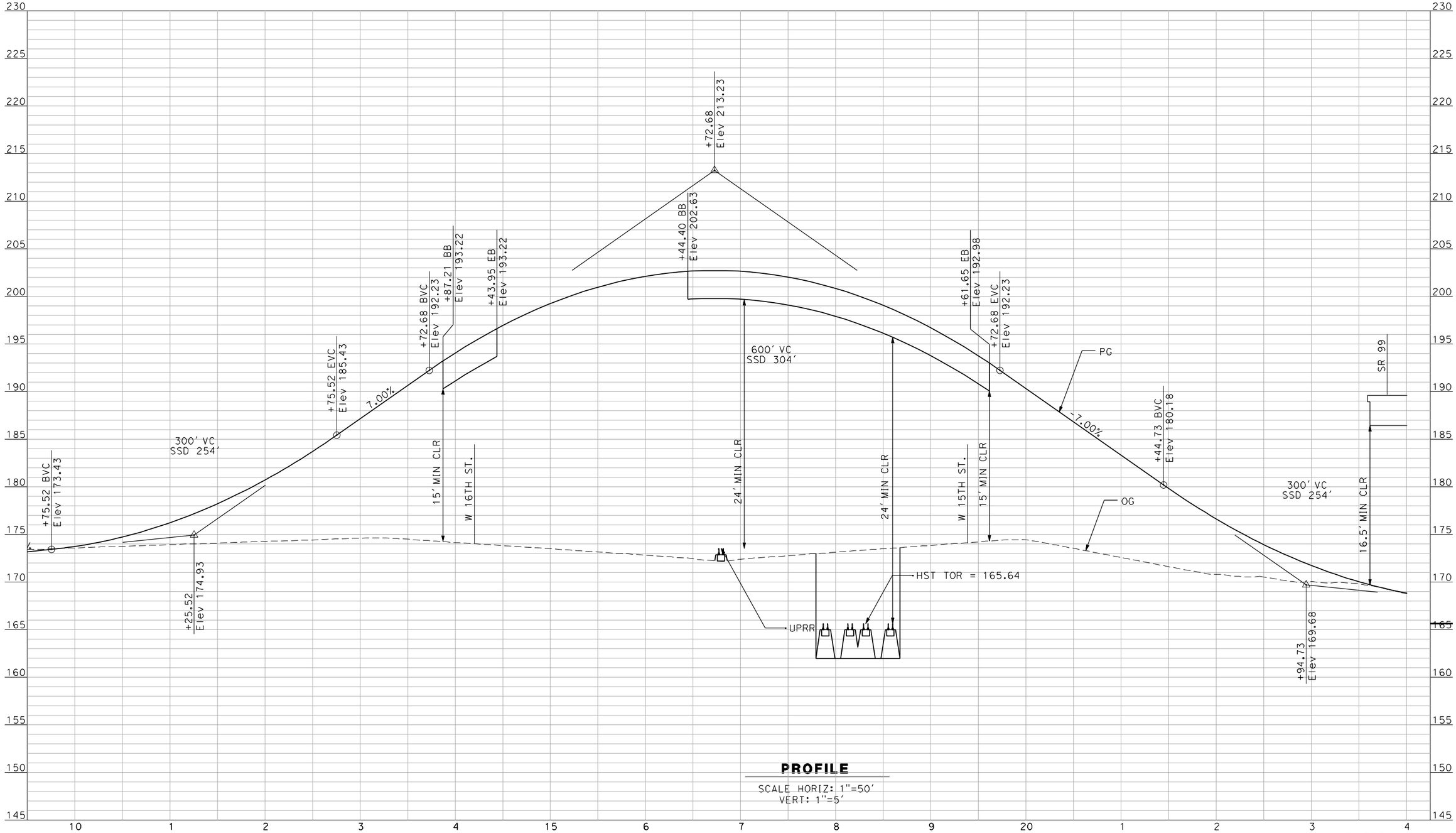

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MERCED CONNECTION - AVE 21 HYBRID
GRADE SEPARATION - G Street
PROFILE
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CT1149-A
SCALE AS SHOWN
SHEET NO. OF ###

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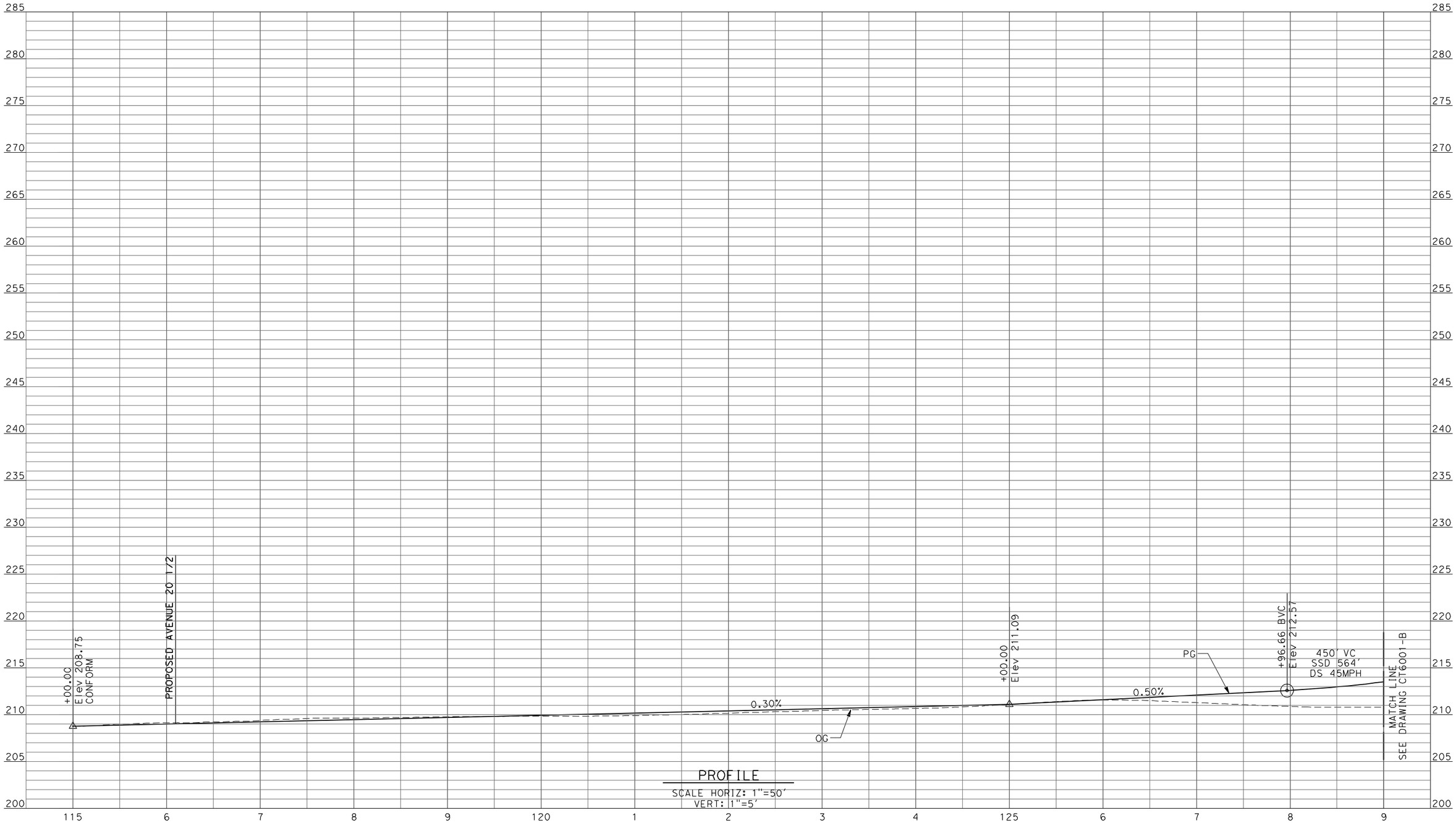

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16 ALT 1
PROFILE
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6000-B
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SHEET NO. ### OF ###

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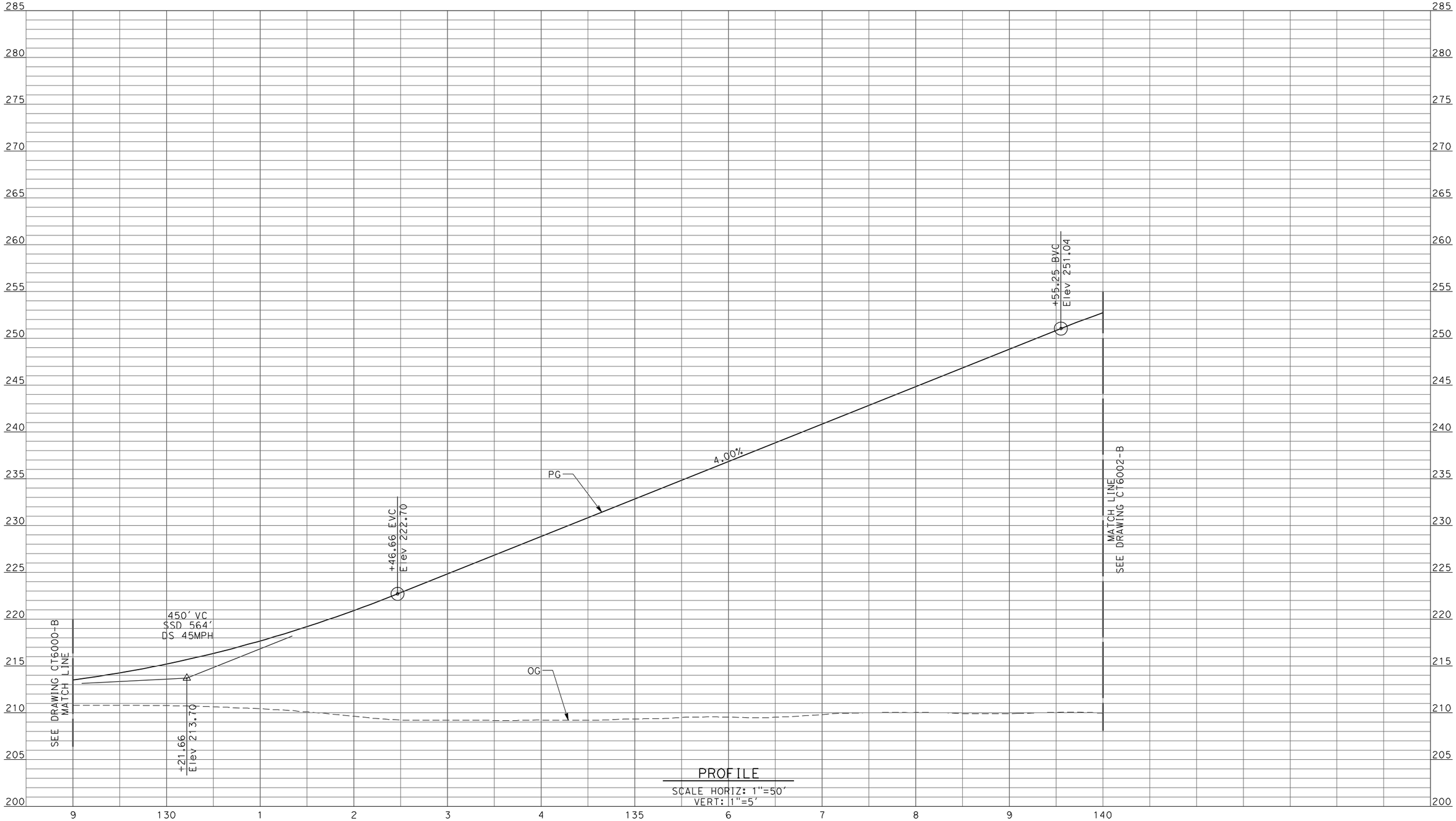

PROFILE

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VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16 ALT 1
PROFILE
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6001-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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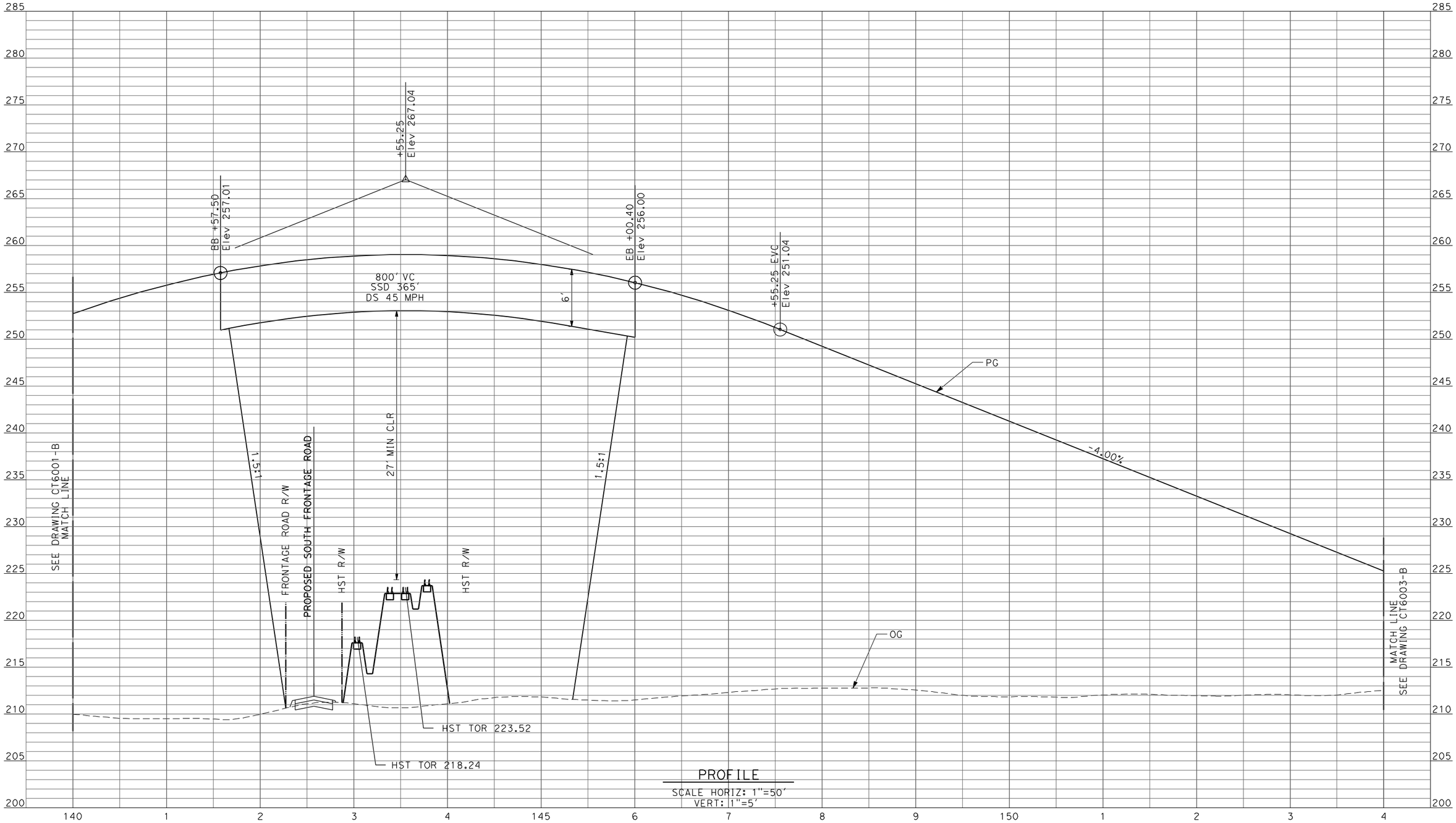

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16 ALT 1
PROFILE
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6002-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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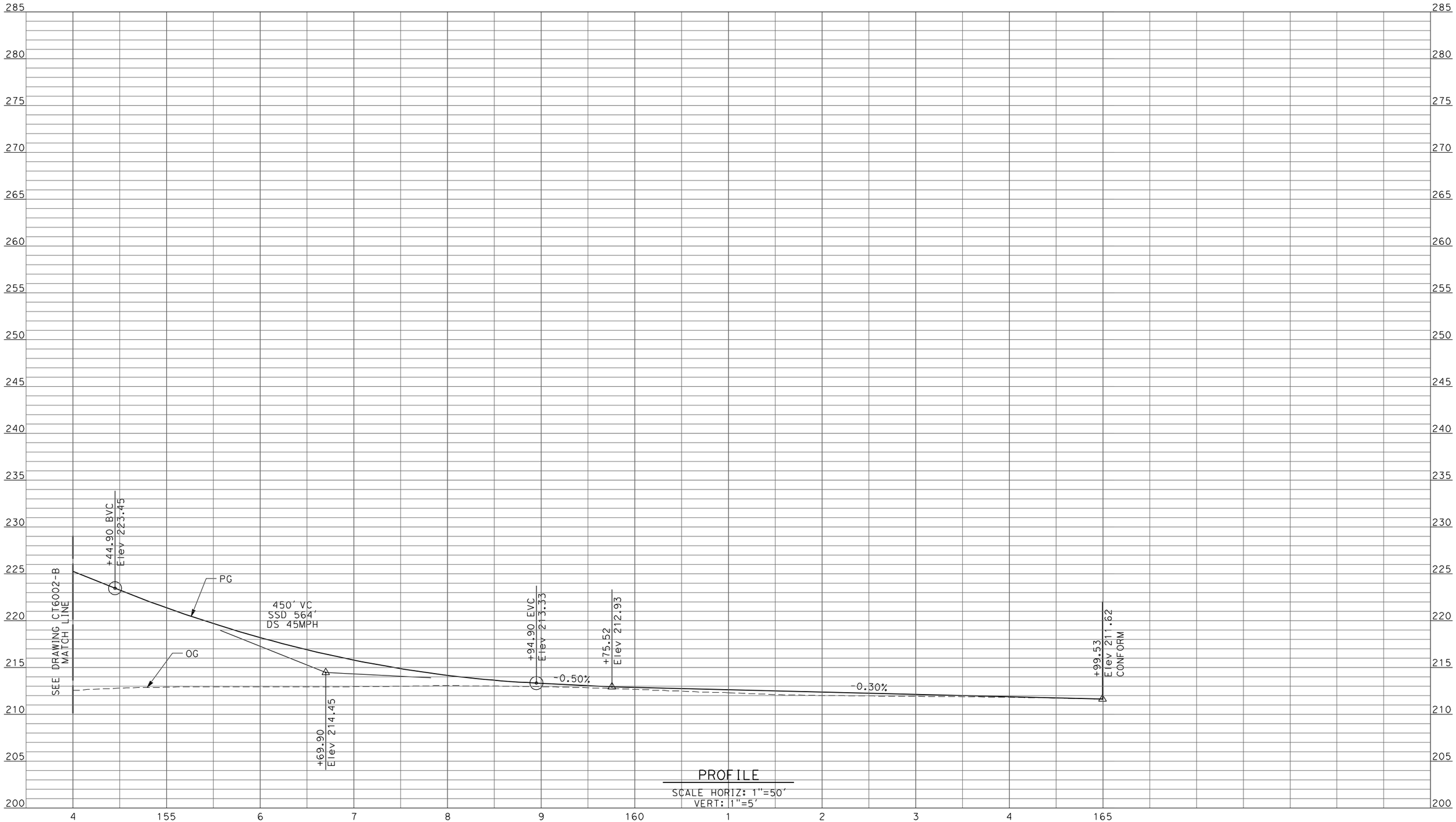

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MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16 ALT 1
PROFILE
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6003-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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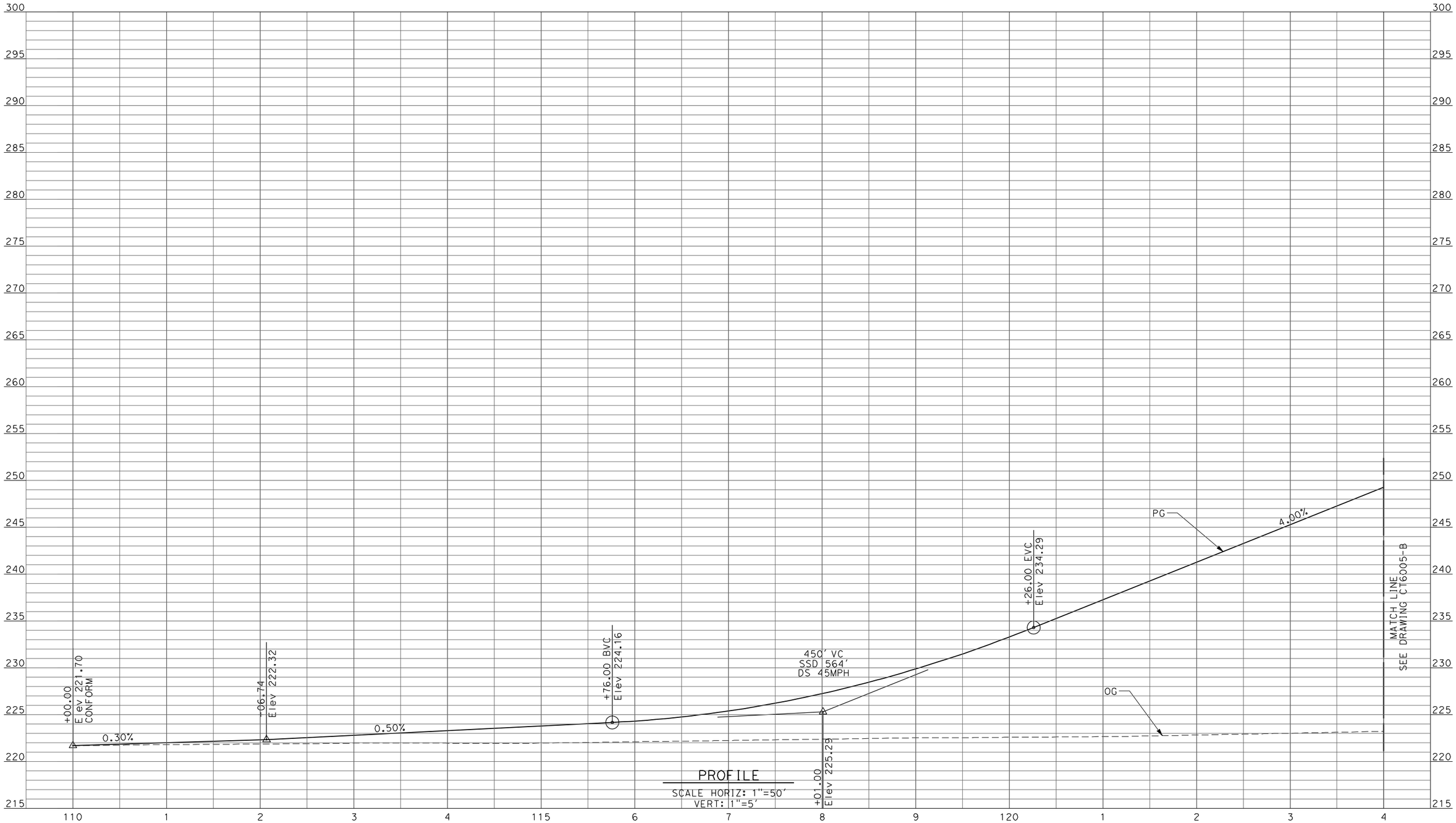

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 17 1/2
PROFILE
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6004-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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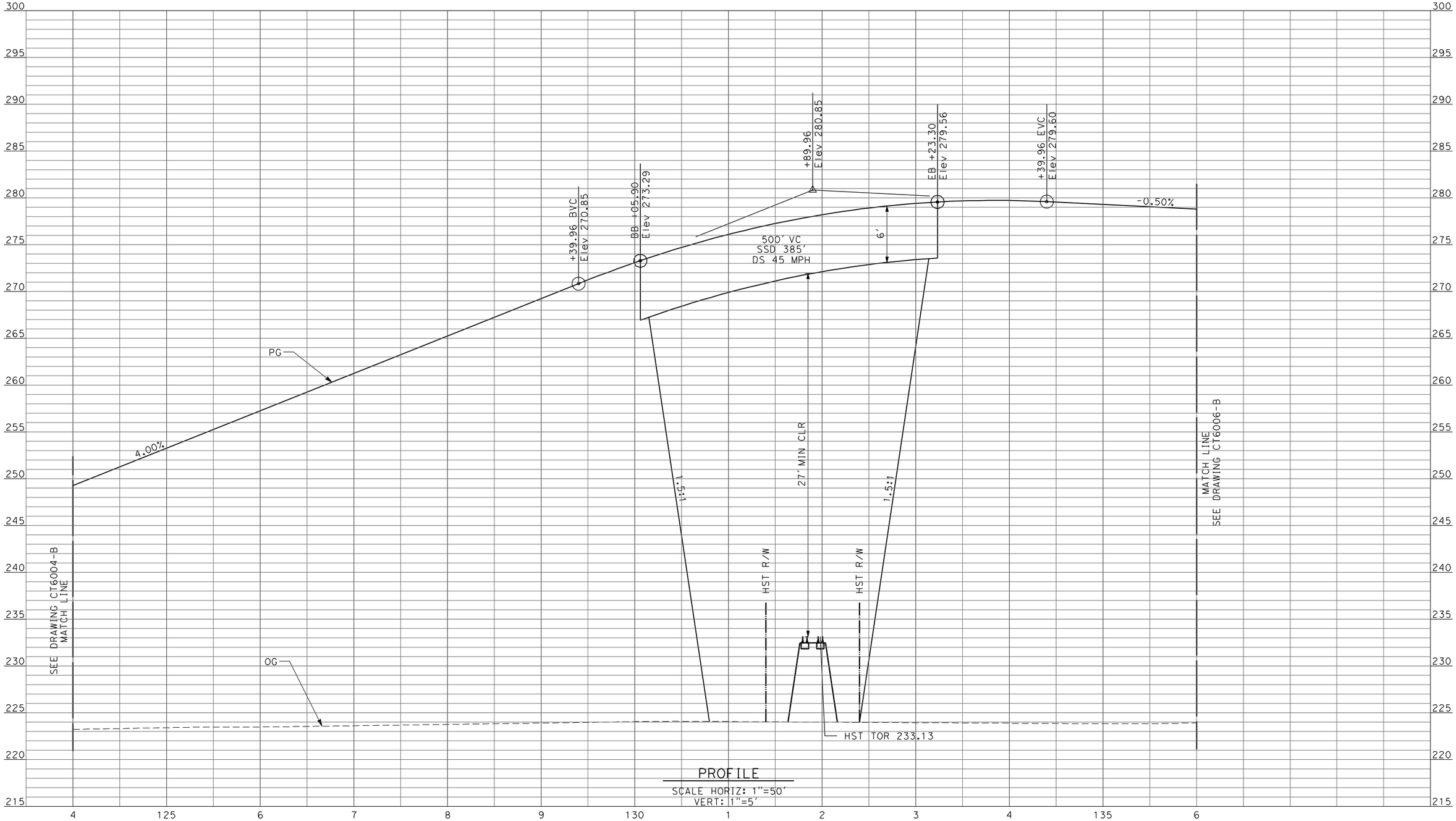

PROFILE

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MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 17 1/2
PROFILE
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6005-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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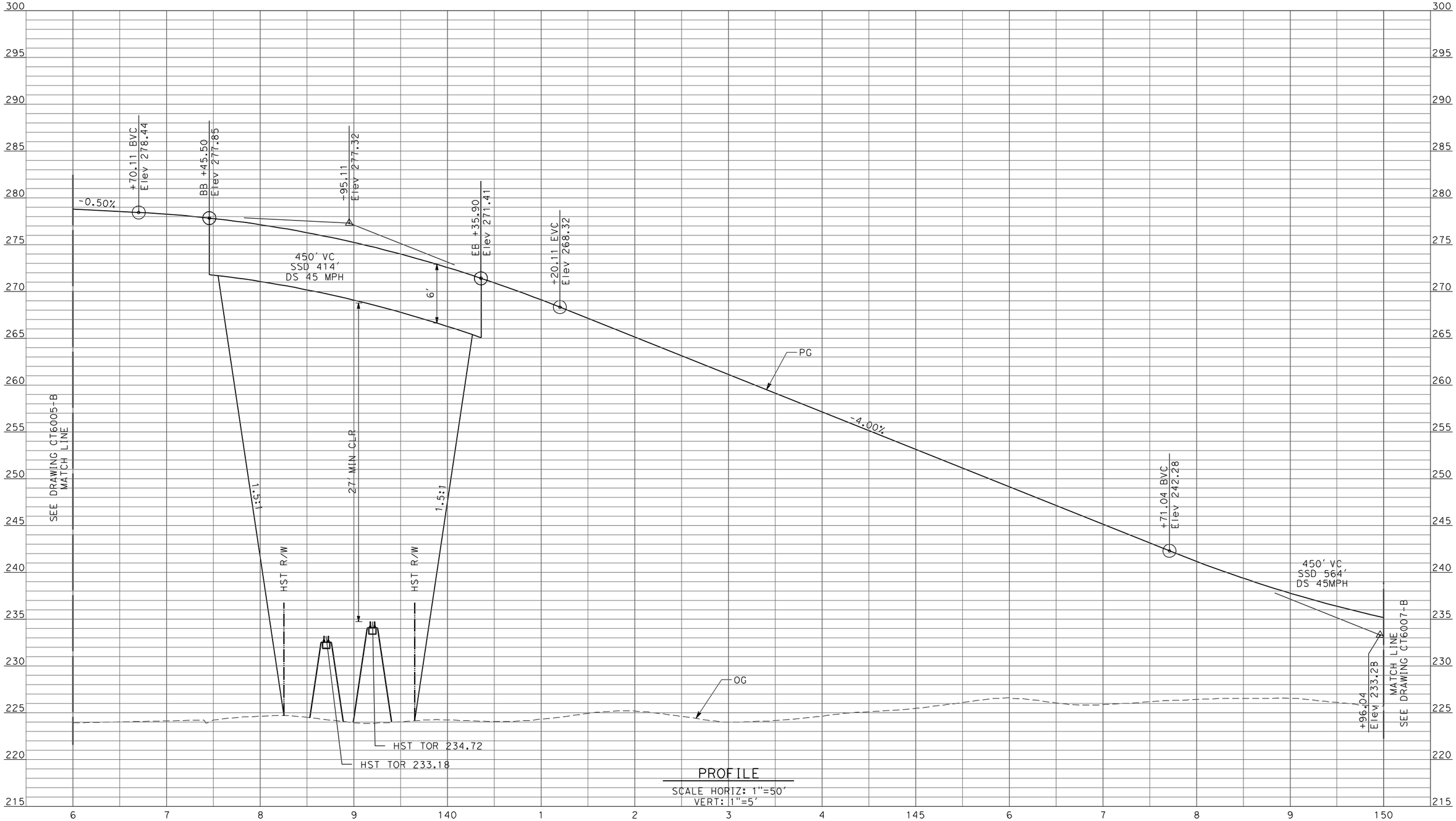

PROFILE

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MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 17 1/2
PROFILE
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6006-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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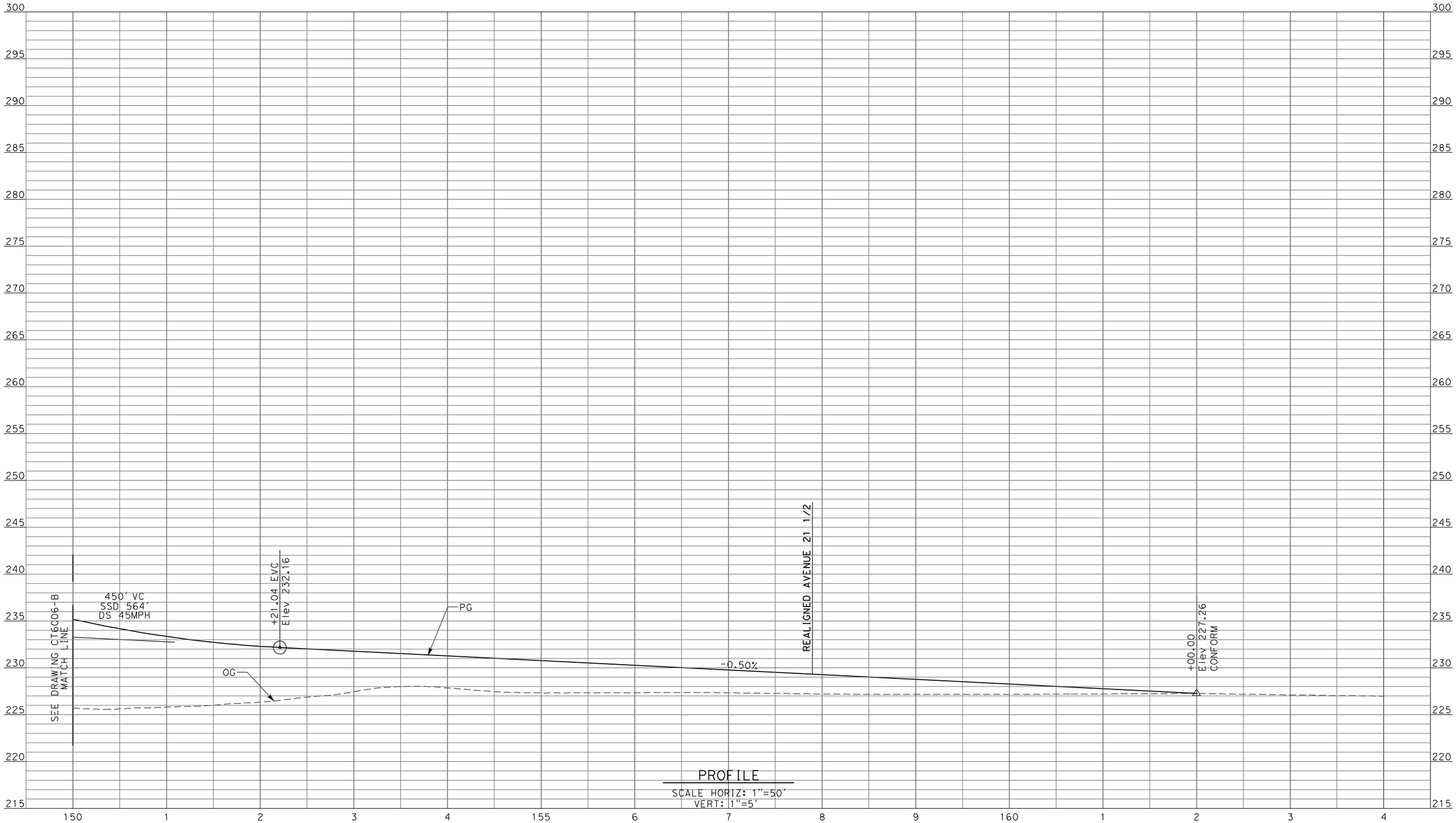

PROFILE

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MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 17 1/2
PROFILE
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT6007-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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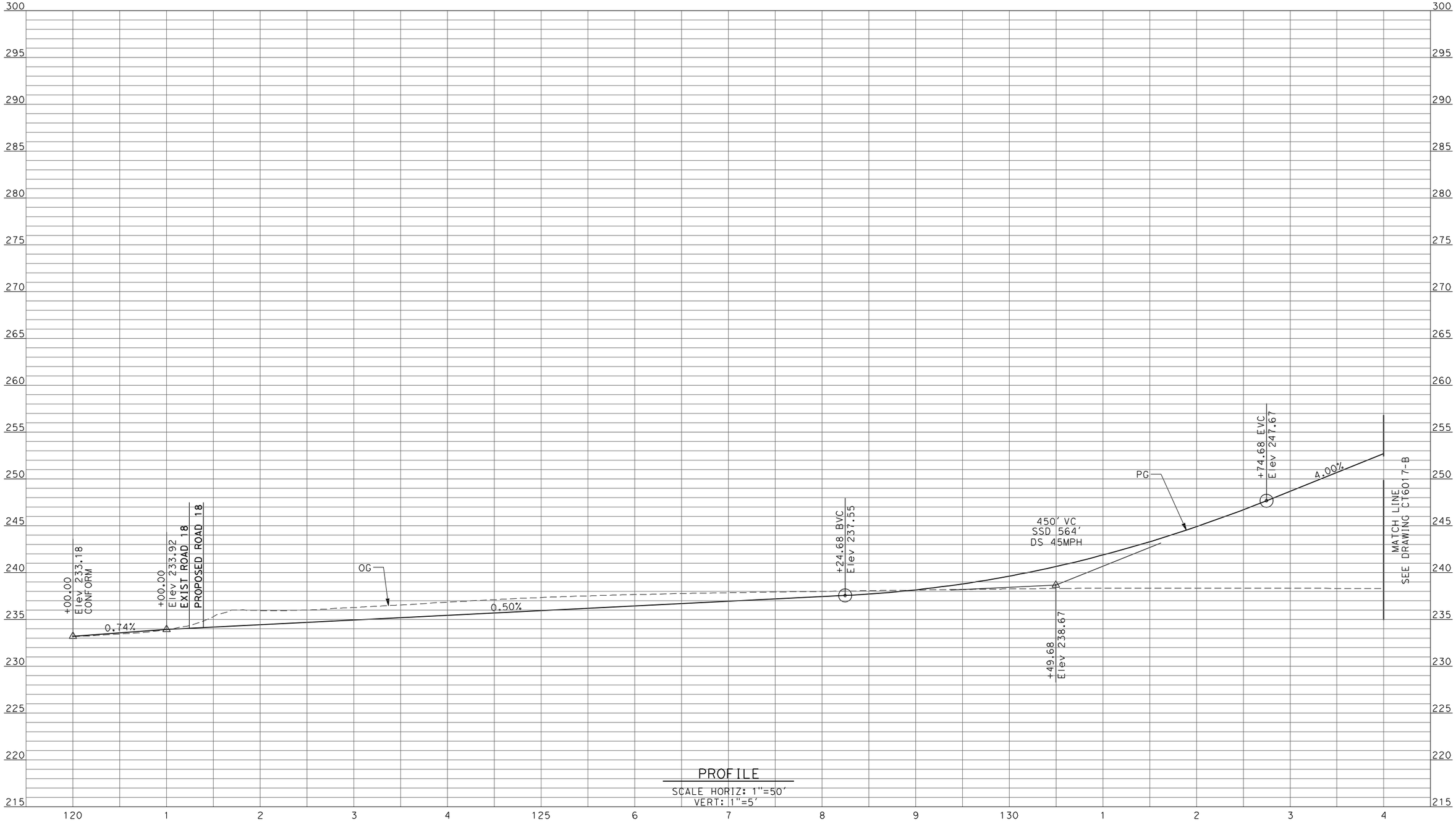

PROFILE

SCALE HORIZ: 1"=50'
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REV	DATE	BY	CHK	APP	DESCRIPTION

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UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 22
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT6016-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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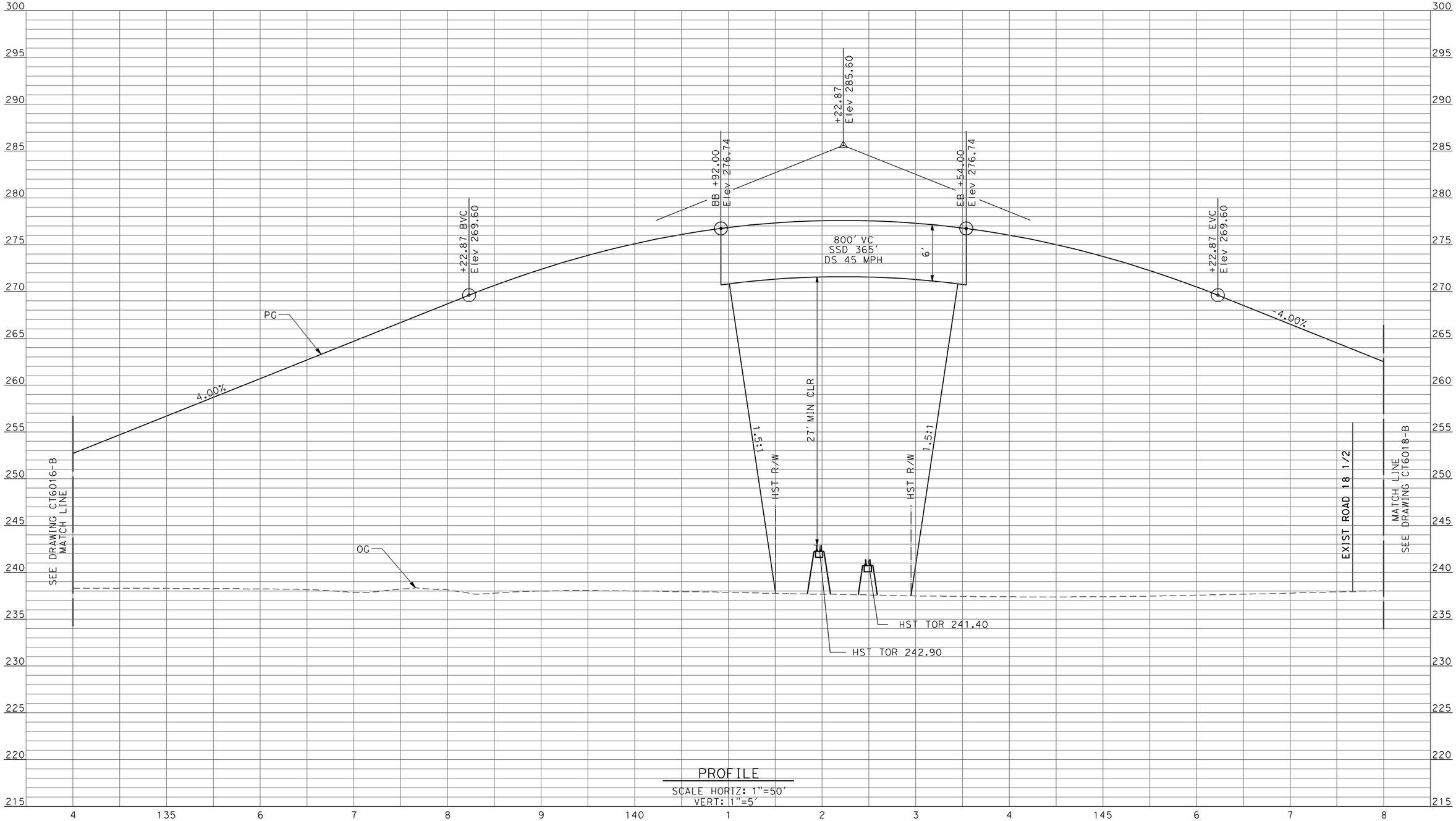

REV	DATE	BY	CHK	APP	DESCRIPTION

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UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 22
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT6017-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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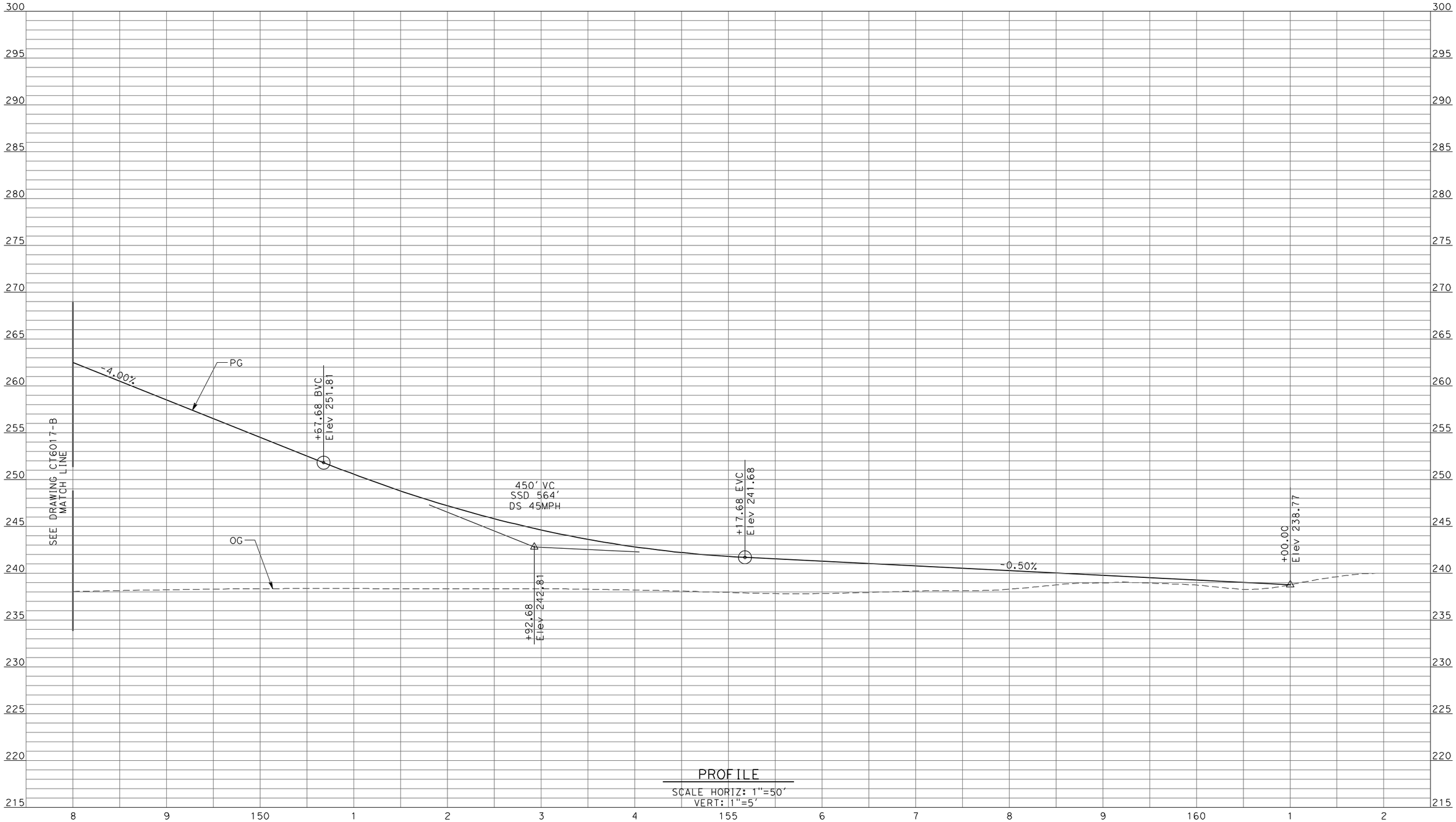

PROFILE

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MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 22
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT6018-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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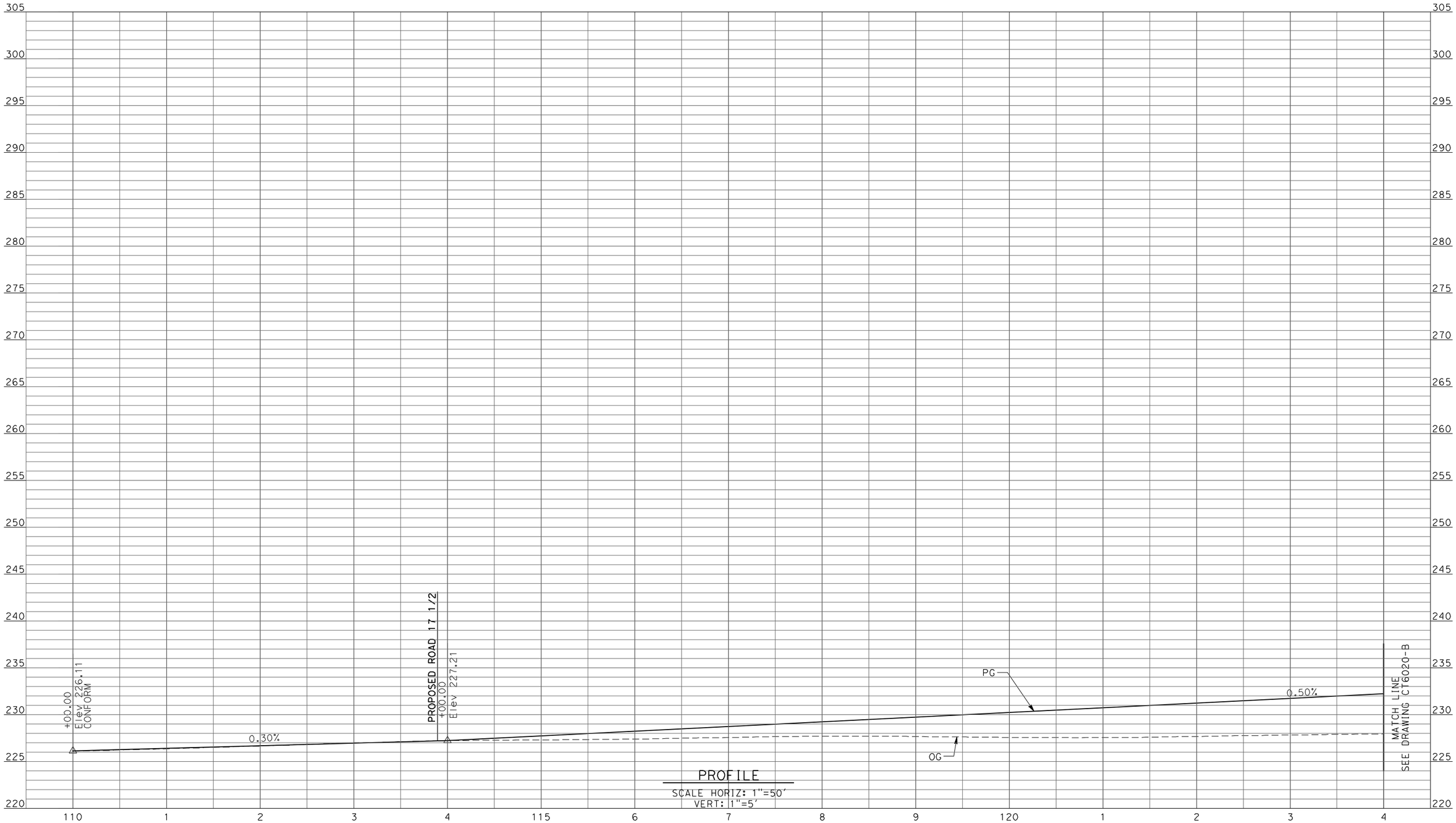

PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 21 1/2
PROFILE
SHEET 1 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT6019-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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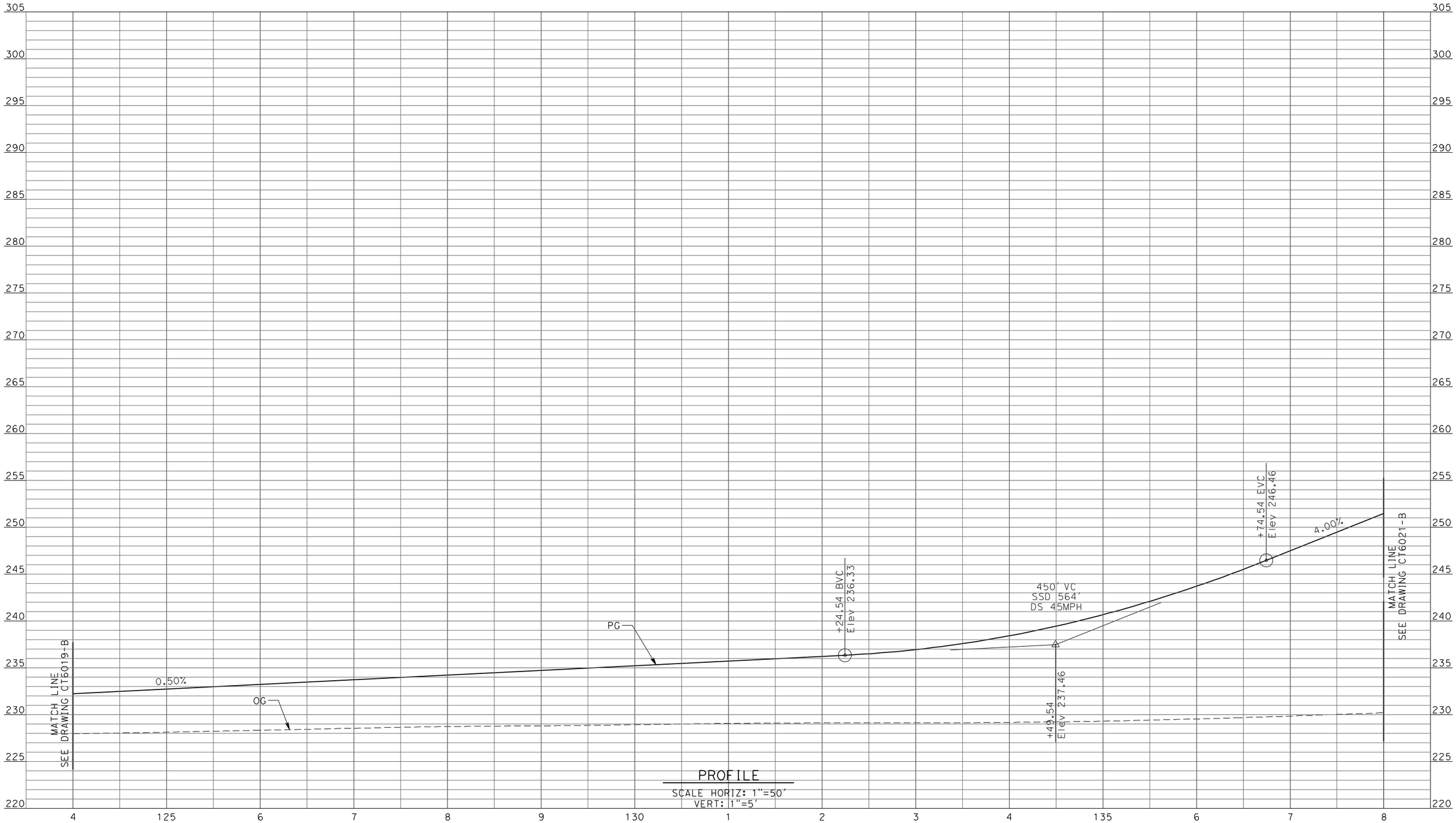

PROFILE

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VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
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MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 21 1/2
PROFILE
SHEET 2 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT6020-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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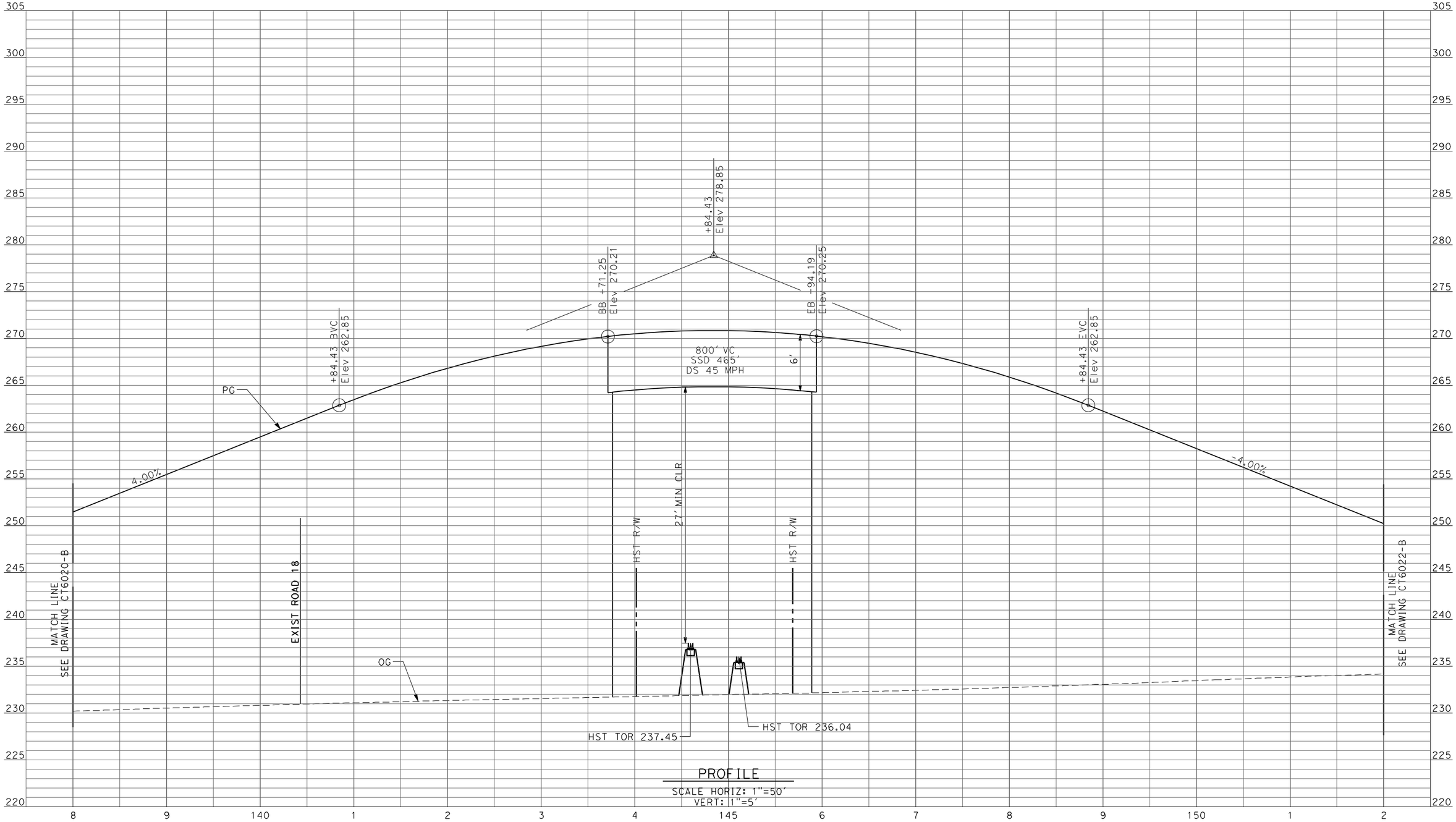

PROFILE

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REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 21 1/2
PROFILE
SHEET 3 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT6021-B
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SHEET NO. ### OF ###

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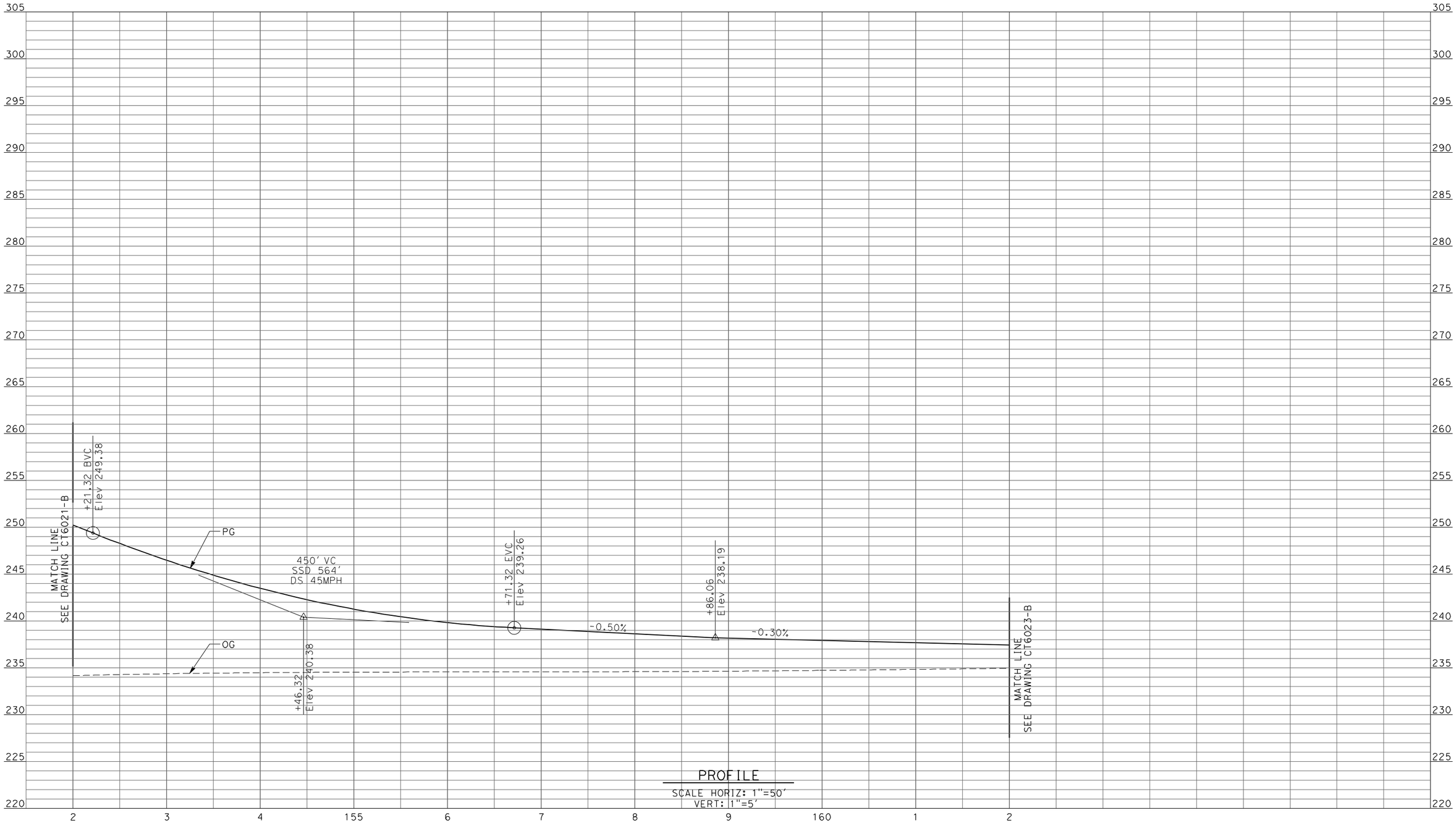

PROFILE

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MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 21 1/2
PROFILE
SHEET 4 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT6022-B
SCALE AS SHOWN
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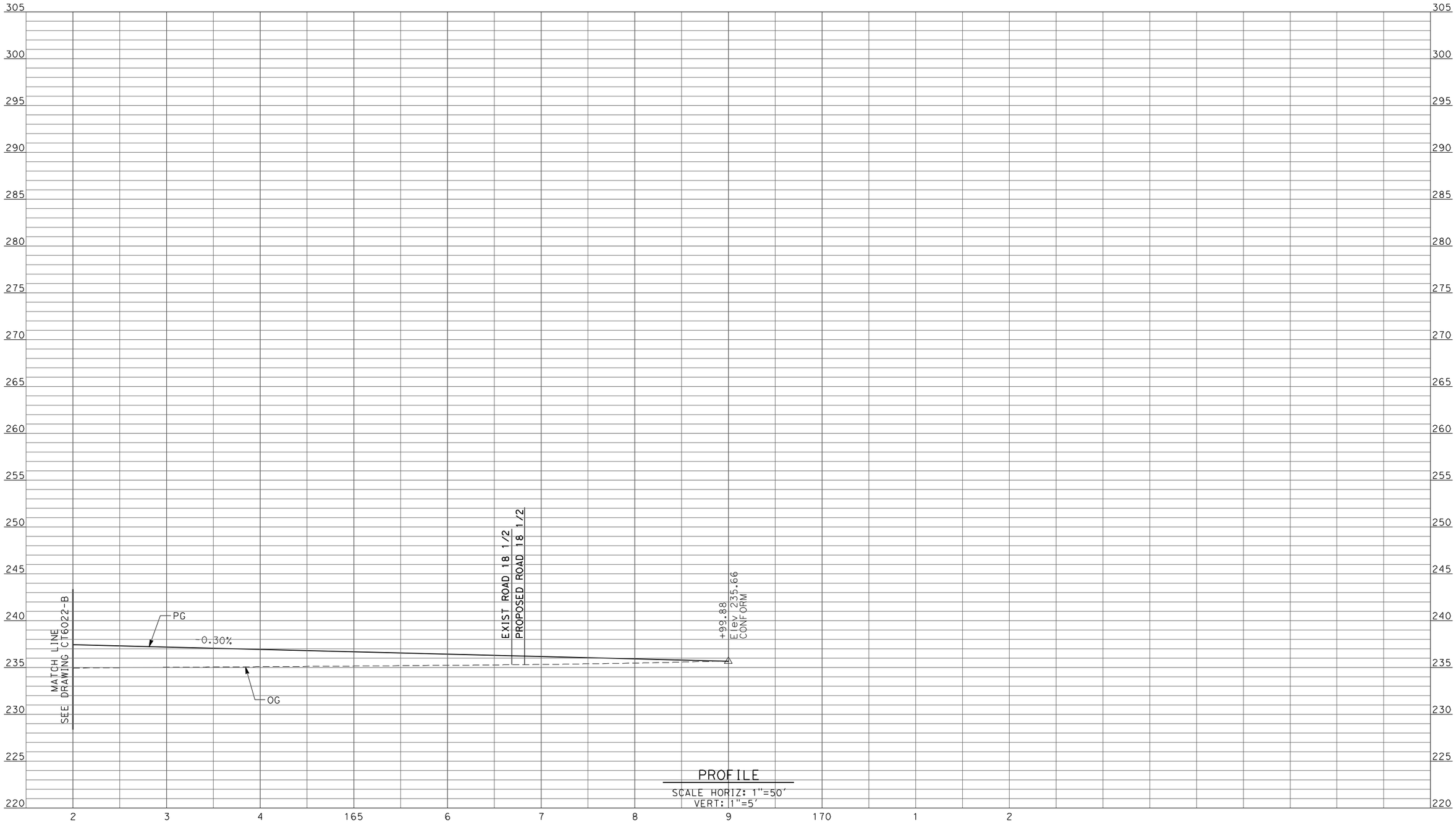

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MERCED TO FRESNO

UPRR/SR99 WYE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 21 1/2
PROFILE
SHEET 5 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT6023-B
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SHEET NO. ### OF ###

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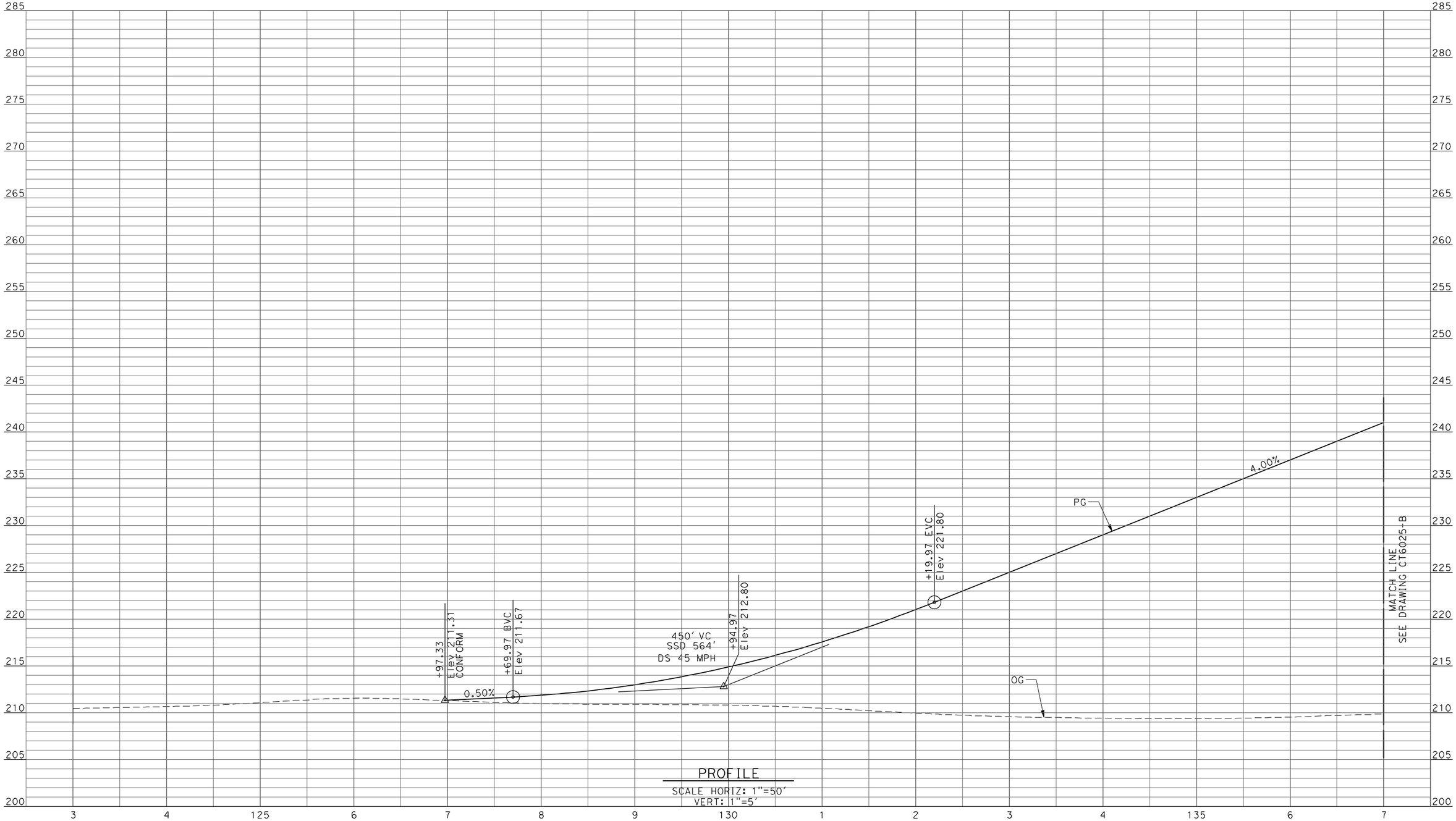

PROFILE

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MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT6024-B
SCALE AS SHOWN
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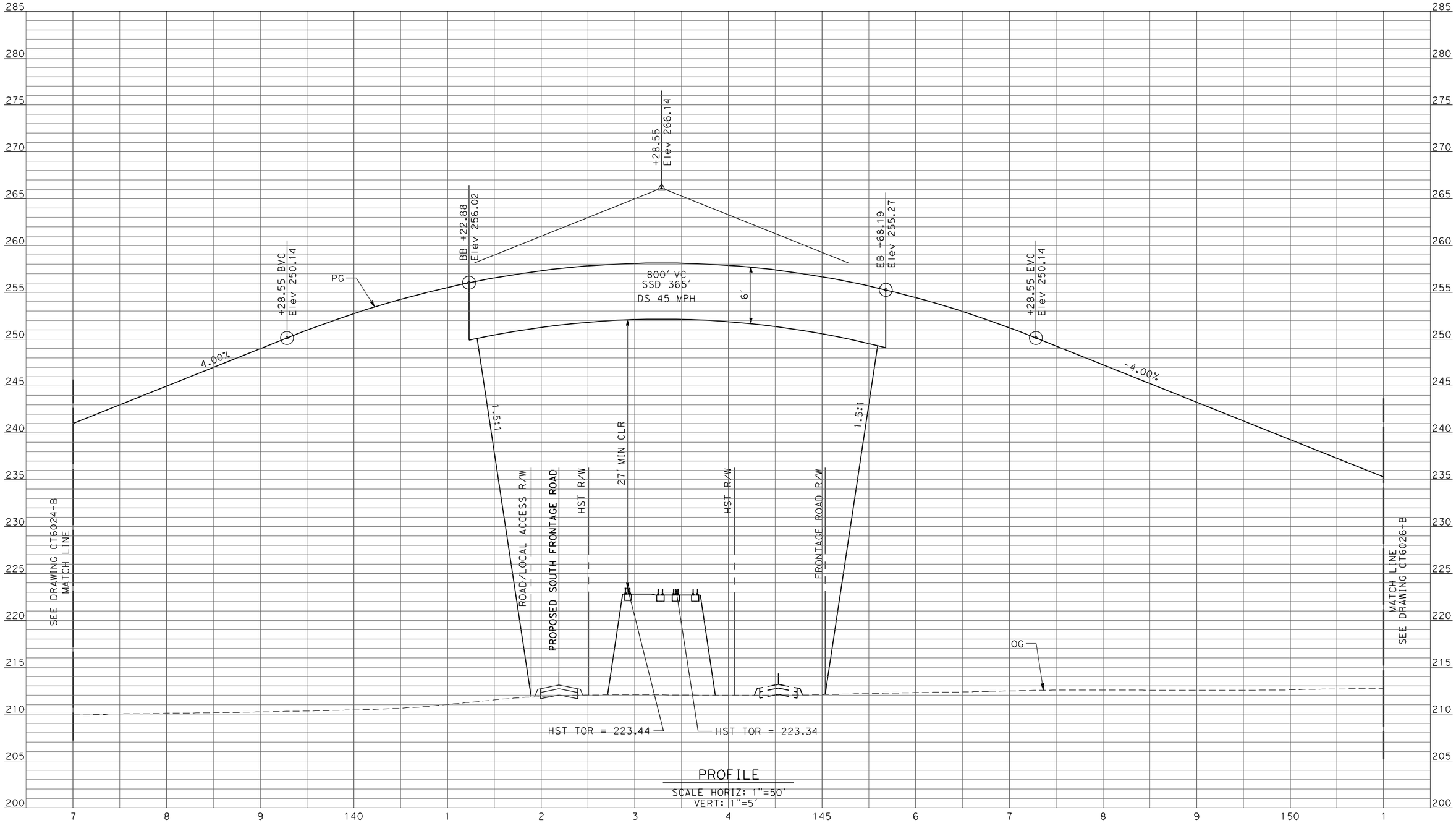

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UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT6025-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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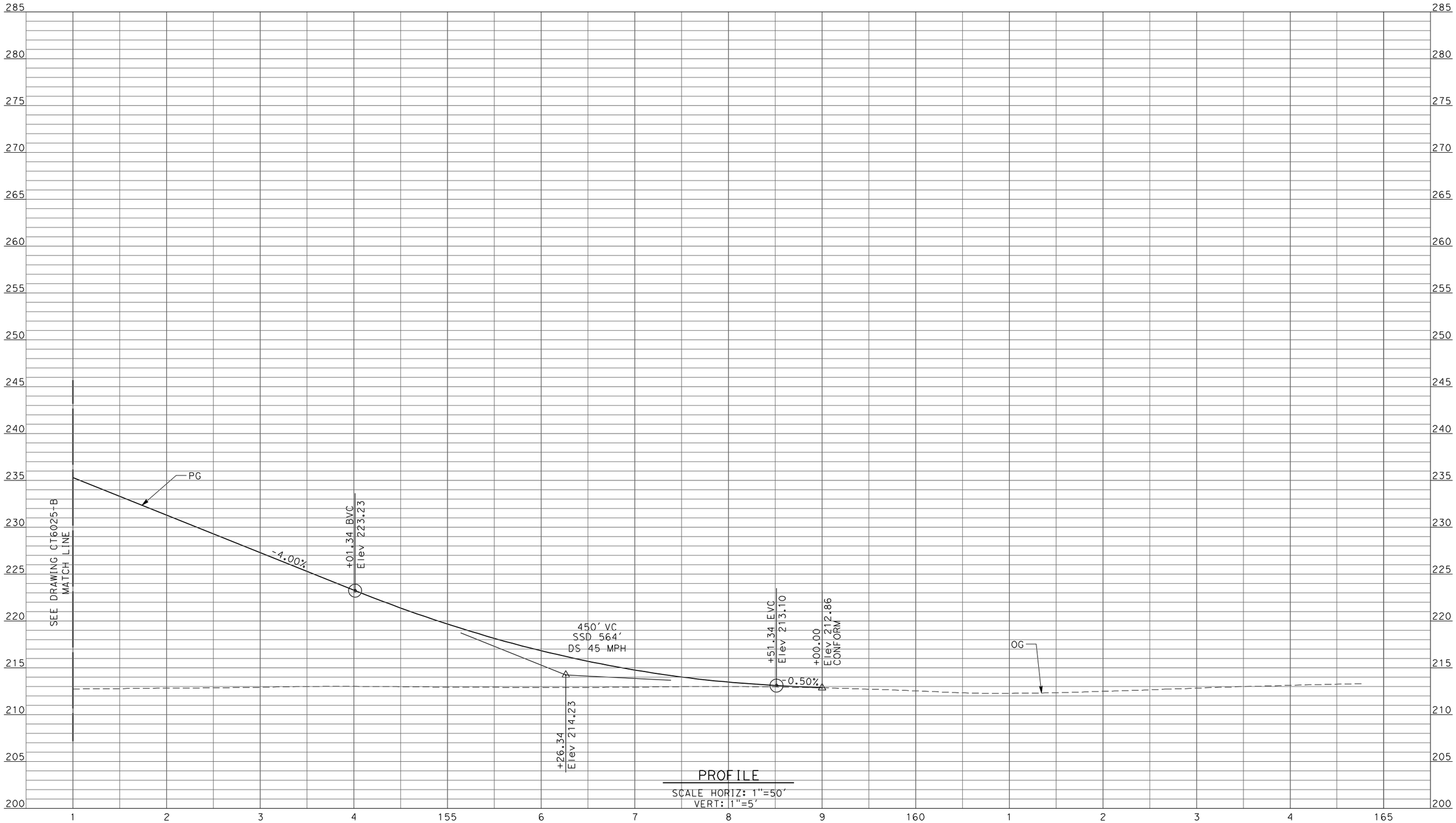

PROFILE

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MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
GRADE SEPARATION - ROAD 16 ALONG EXIST ALT 2
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT6026-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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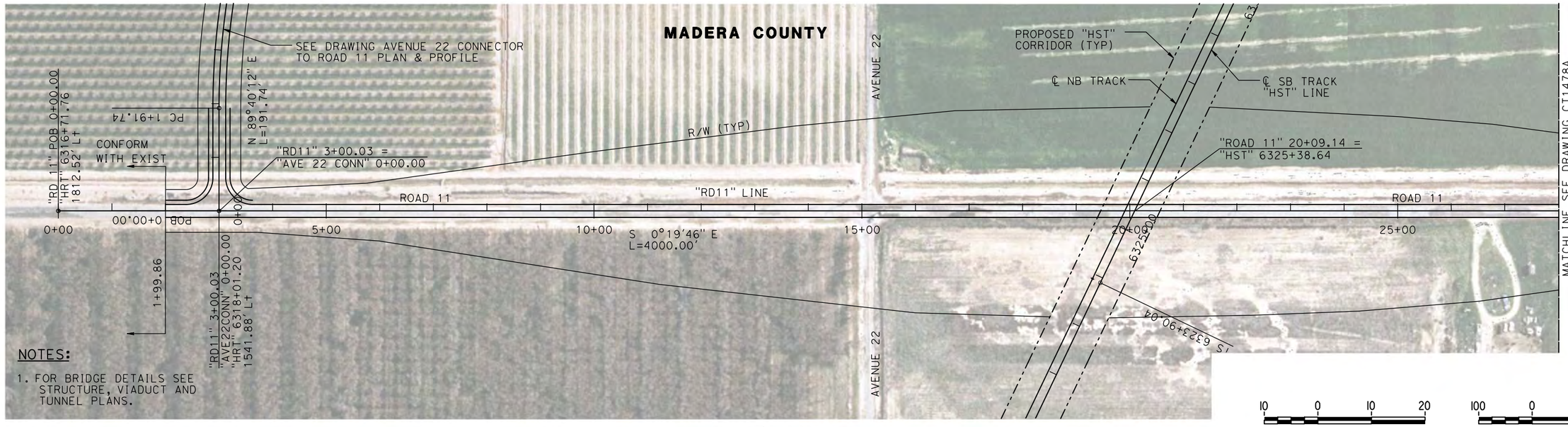


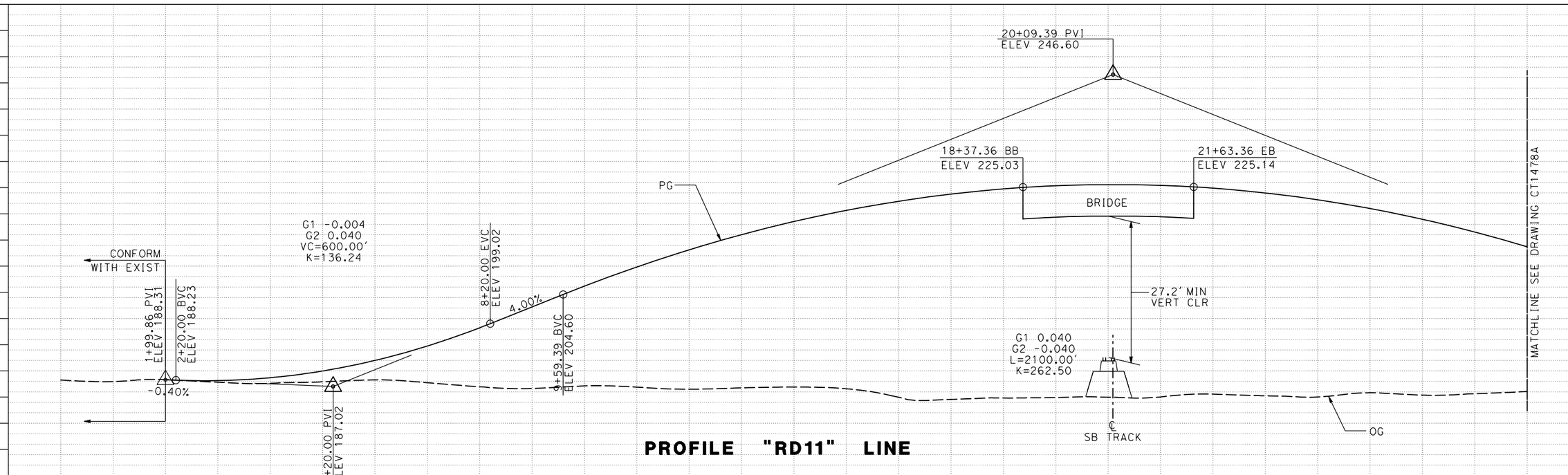
NOTES:

1. FOR BRIDGE DETAILS SEE STRUCTURE, VIADUCT AND TUNNEL PLANS.

10 0 10 20 VERT: 1"=10'

100 0 100 200 HORIZ: 1"=100'

PLAN



PROFILE "RD11" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

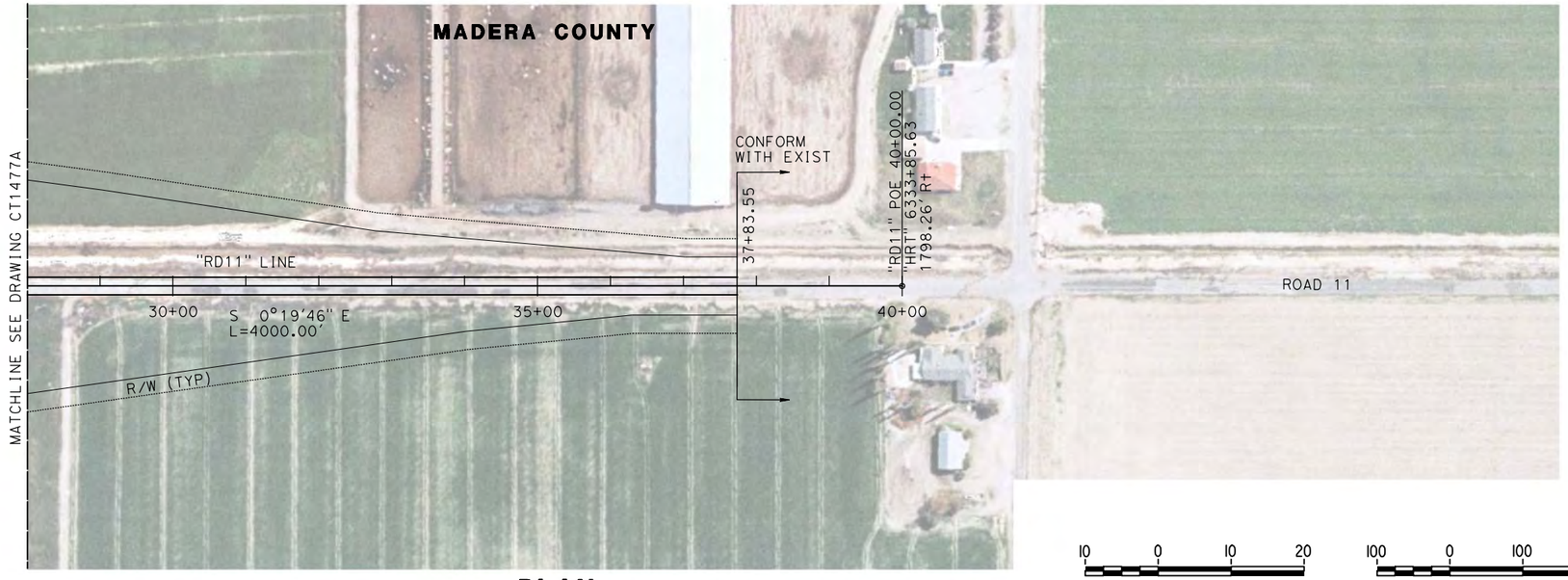
PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR 152/AVENUE 21
ROAD 11 GRADE SEPARATION
PLAN AND PROFILE

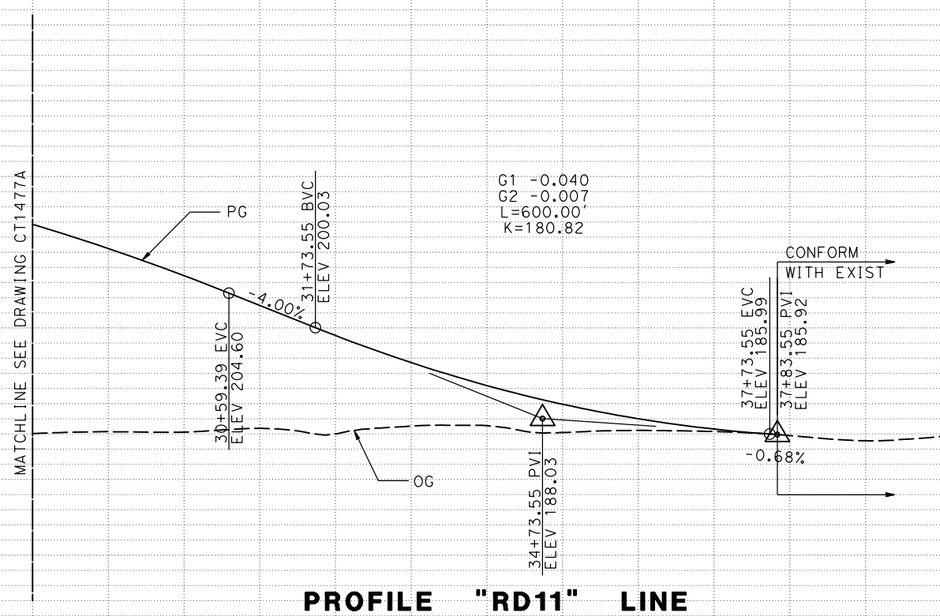
CONTRACT NO. HSR08-05
DRAWING NO. CT1477A
SCALE AS SHOWN
SHEET NO. 1 OF 2

p0039764 7/20/2011 6:28:09 PM c:\pw_working\ptgpwiseb\p0039764\dms66816\JM-CT-1477A.dgn



PLAN

VERT: 1"=10' HORIZ: 1"=100'



PROFILE "RD11" LINE

STATION	8	9	30+00	1	2	3	4	35+00	6	7	8	9	40+00	1	TOTAL
CY EXC															
CY EMB															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

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PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR 152/AVENUE 21
ROAD 11 GRADE SEPARATION
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CT1478A
SCALE AS SHOWN
SHEET NO. 2 OF 2

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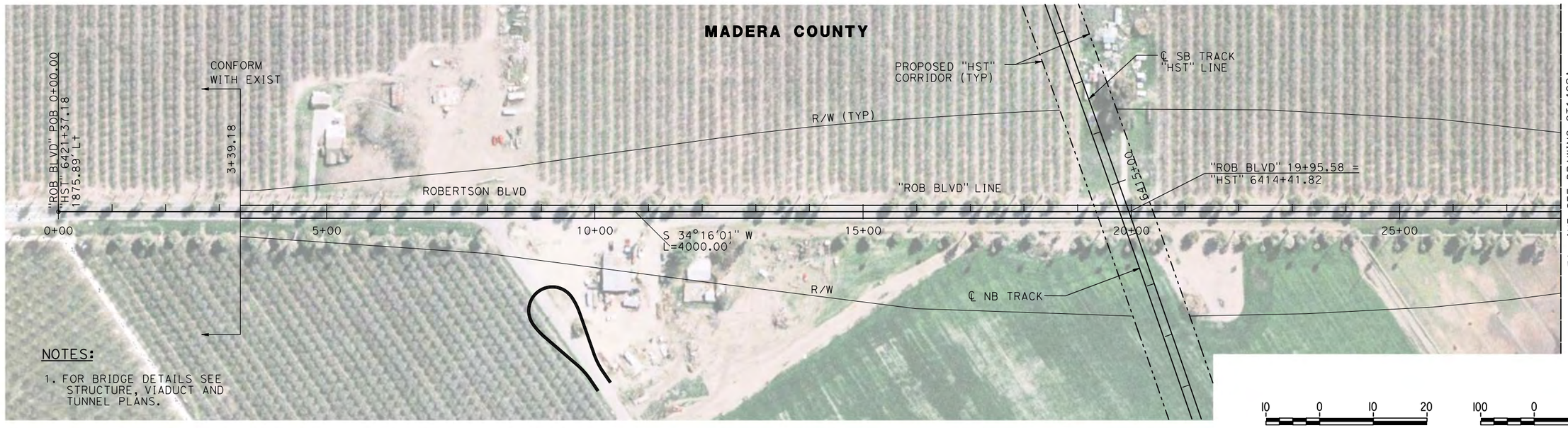
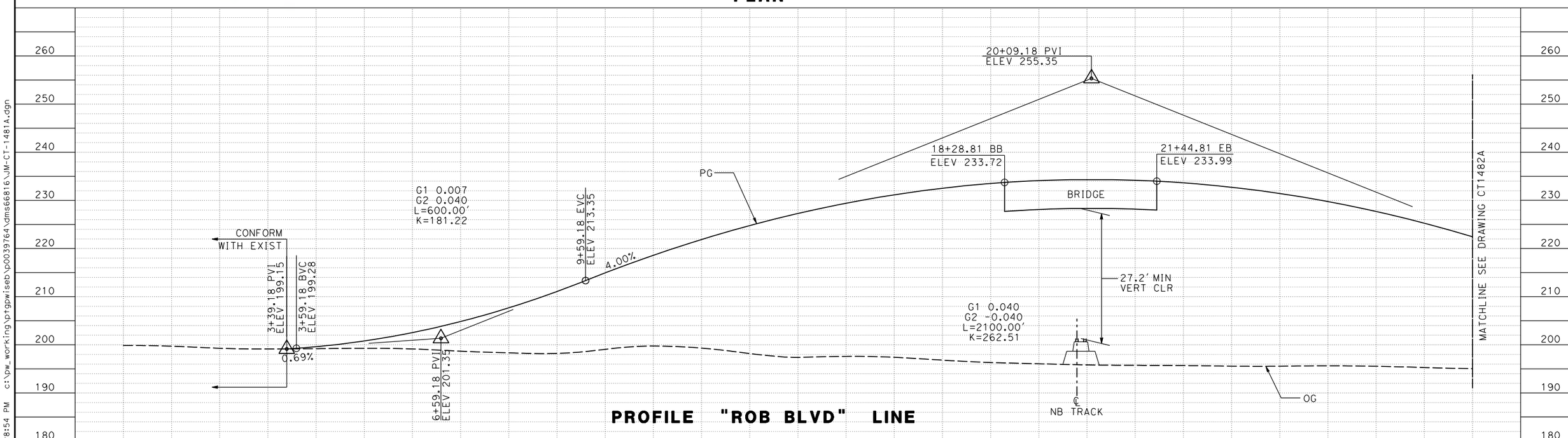


10 0 10 20 VERT: 1"=10'

100 0 100 200 HORIZ: 1"=100'

PLAN



PROFILE "ROB BLVD" LINE

STATION	0+00	1	2	3	4	5+00	6	7	8	9	10+00	1	2	3	4	15+00	6	7	8	9	20+00	1	2	3	4	25+00	6	7	8	TOTAL
CY EXC																														
CY EMB																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR 152/AVENUE 21
ROBERTSON BLVD GRADE SEPARATION
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CT1481A
SCALE AS SHOWN
SHEET NO. 1 OF 2

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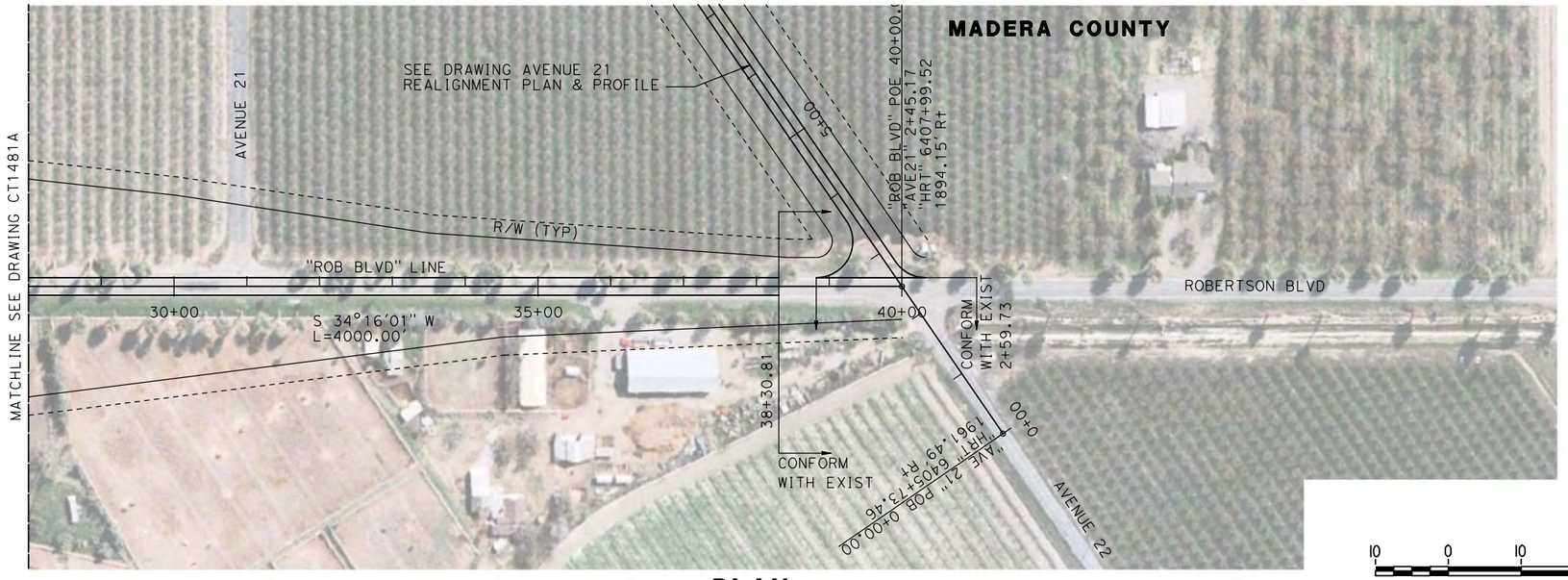
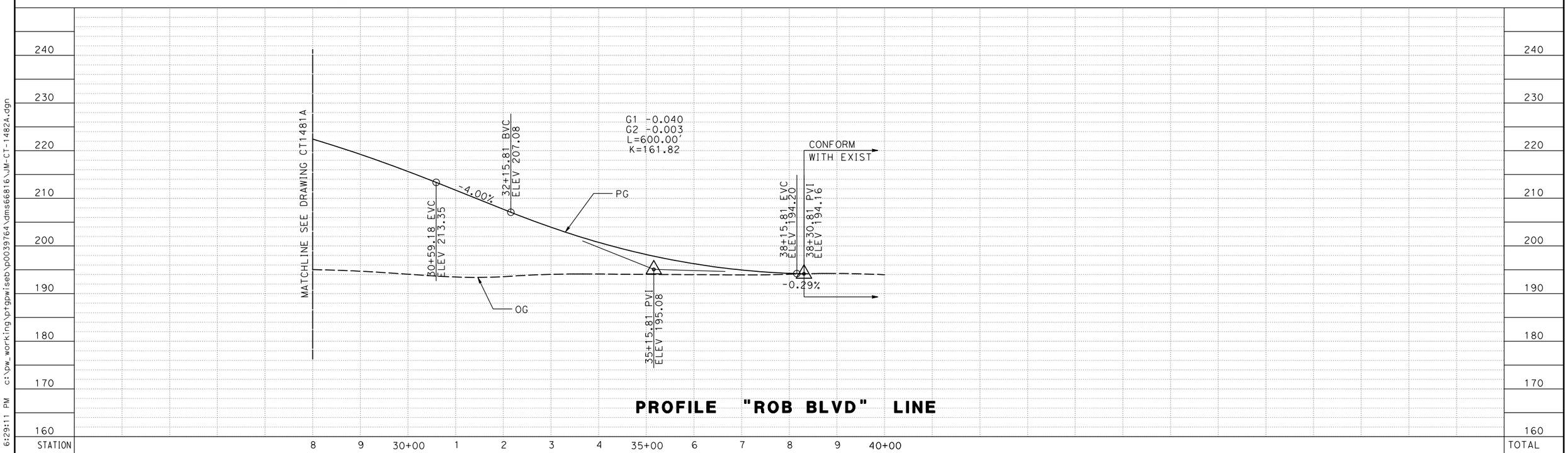


PLAN

VERT: 1"=10' HORIZ: 1"=100'



PROFILE "ROB BLVD" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR 152/AVENUE 21
ROBERTSON BLVD GRADE SEPARATION
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CT1482A
SCALE AS SHOWN
SHEET NO. 2 OF 2

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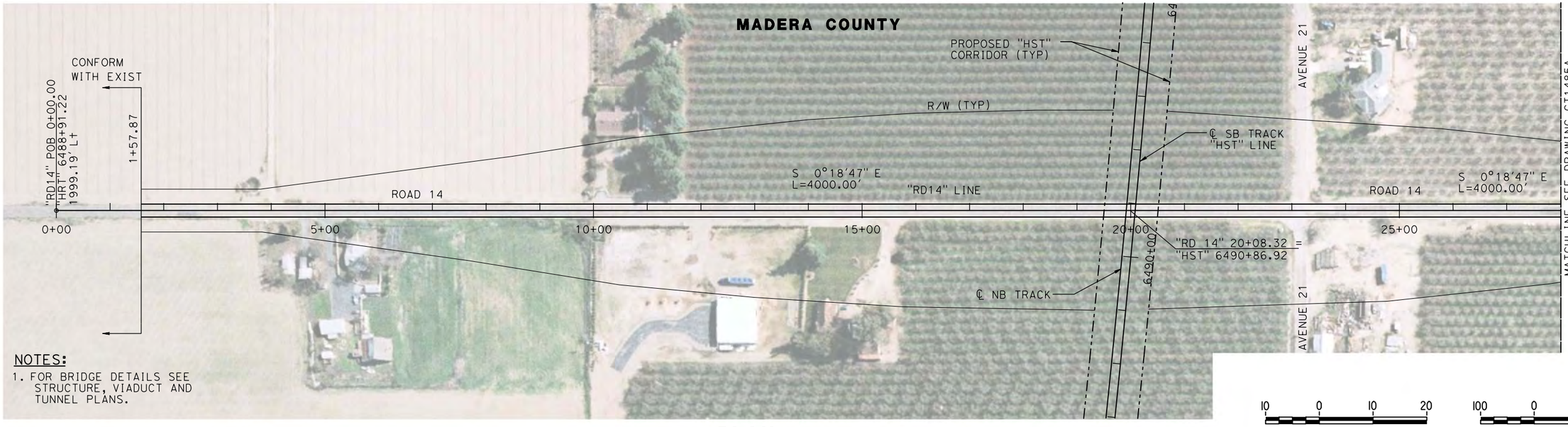
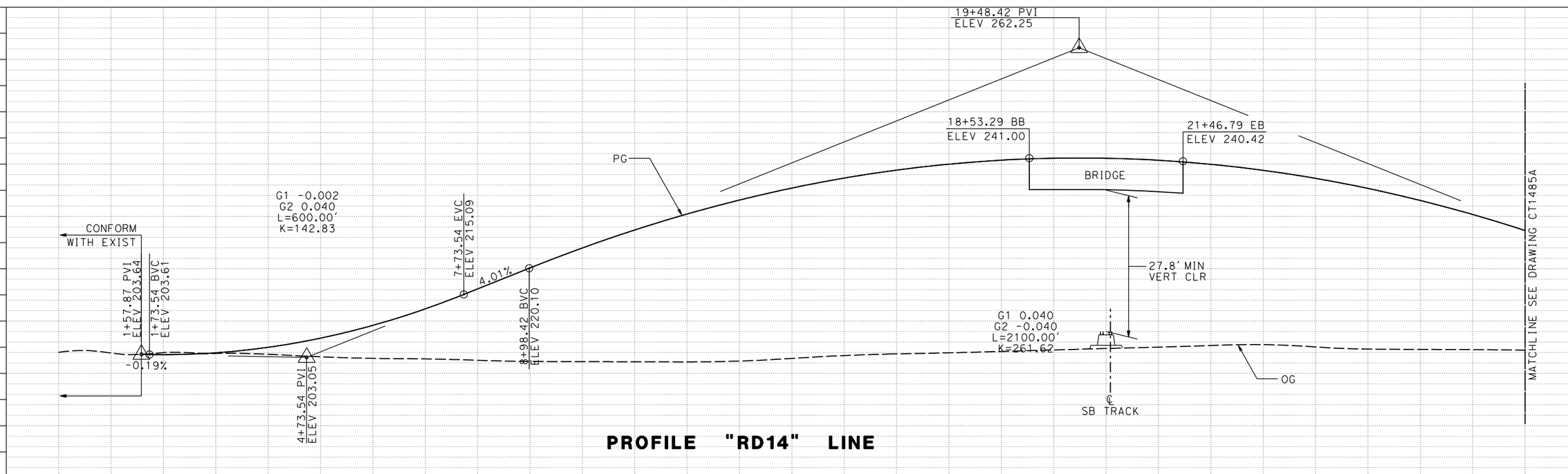


NOTES:

1. FOR BRIDGE DETAILS SEE STRUCTURE, VIADUCT AND TUNNEL PLANS.

VERT: 1"=10' HORIZ: 1"=100'

PLAN



PROFILE "RD14" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

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PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR 152/AVENUE 21
ROAD 14 GRADE SEPARATION
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CT1484A
SCALE AS SHOWN
SHEET NO. 1 OF 2

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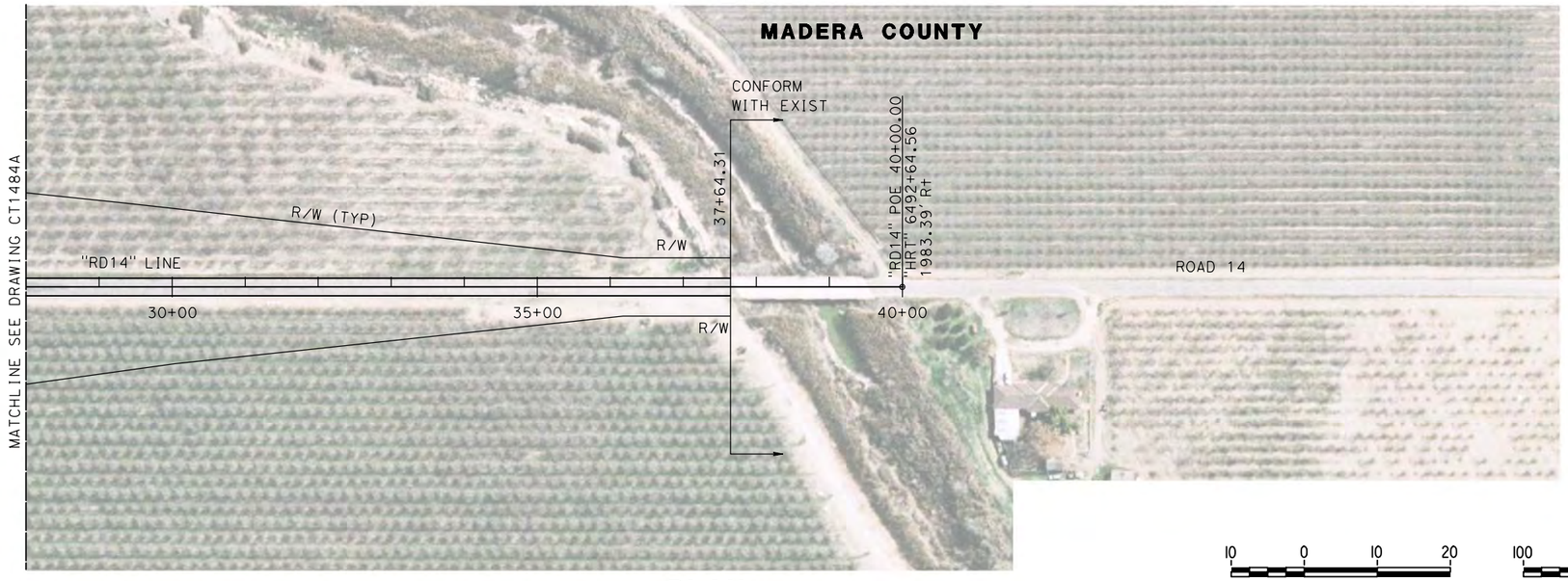
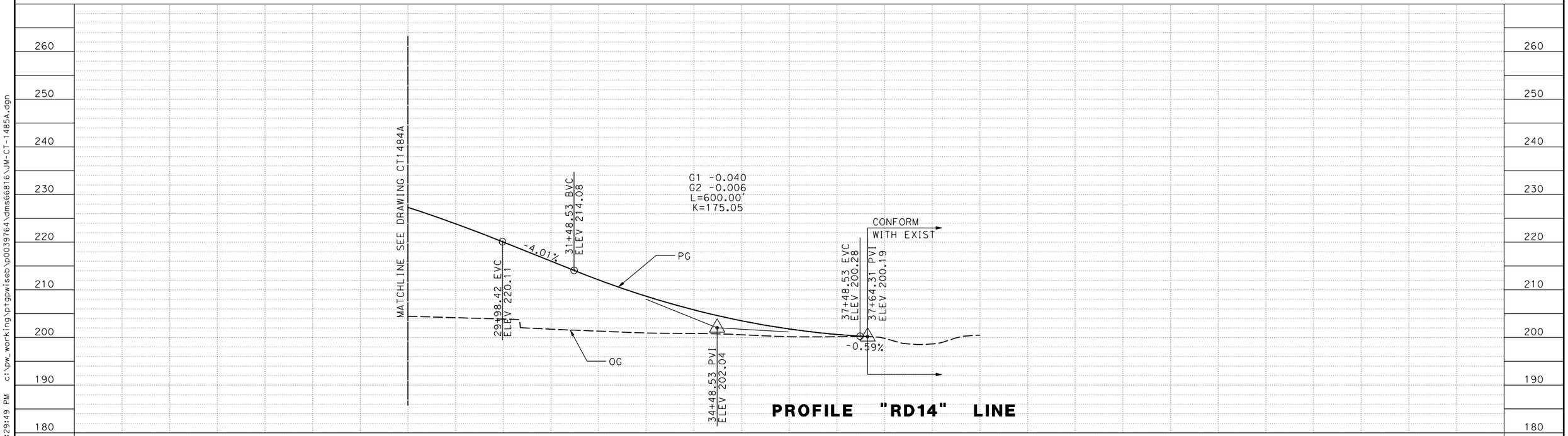


PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "RD14" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR 152/AVENUE 21
ROAD 14 GRADE SEPARATION
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CT1485A
SCALE AS SHOWN
SHEET NO. 2 OF 2

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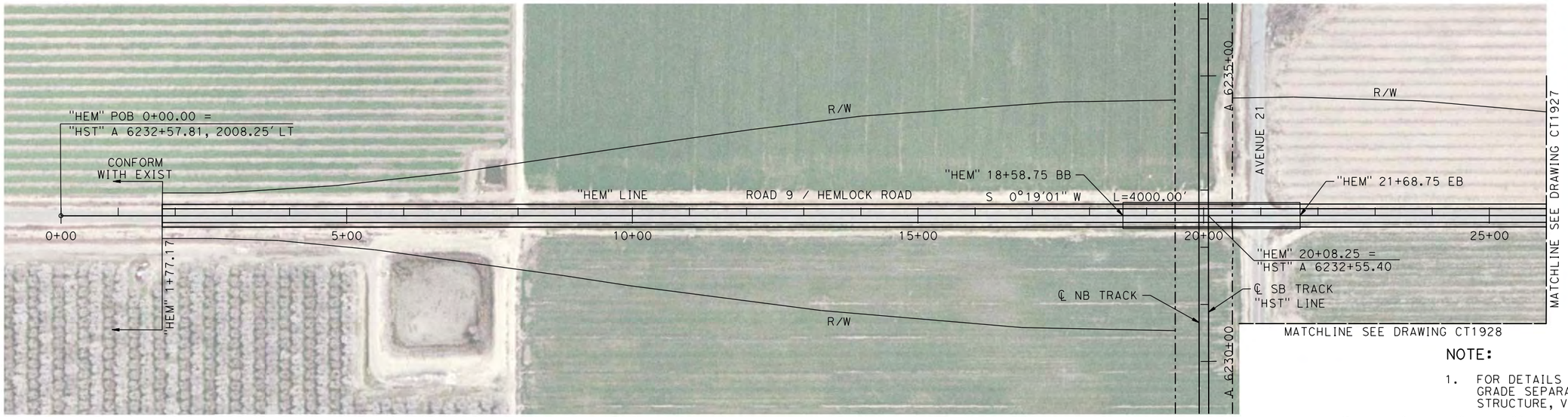
MADERA COUNTY



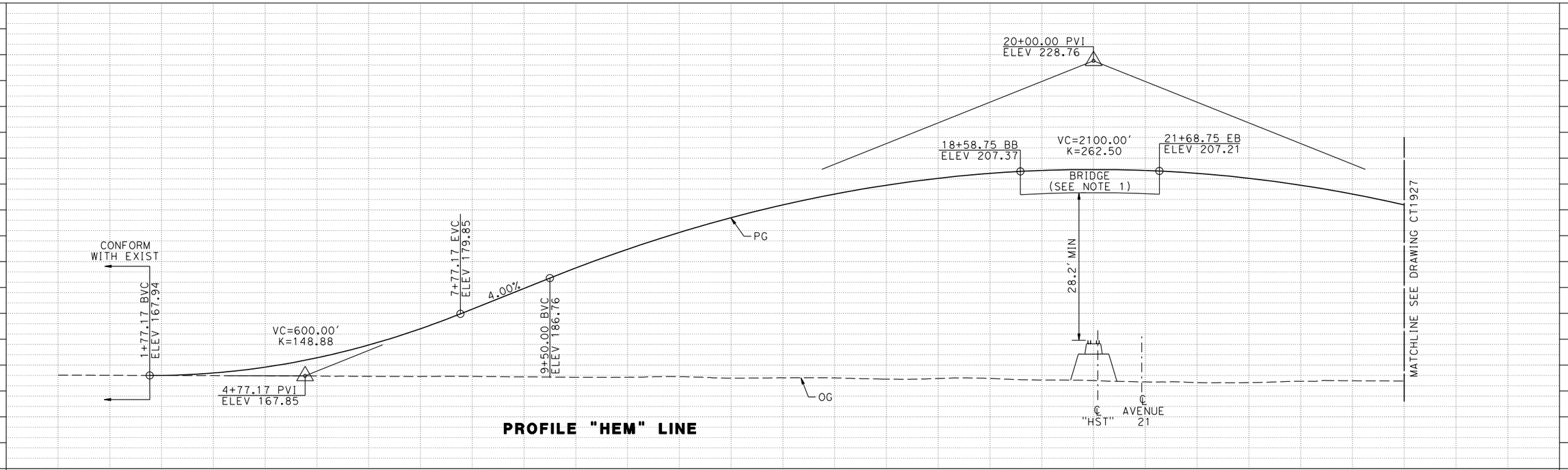
PLAN

NOTE:

1. FOR DETAILS OF ROAD 9 / HEMLOCK ROAD GRADE SEPARATION BRIDGE SEE STRUCTURE, VIADUCT, AND TUNNEL PLANS.

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "HEM" LINE

STATION	0+00	5+00	10+00	15+00	20+00	25+00	TOTAL
CY EXC							
CY EMB							

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

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PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 9 / HEMLOCK ROAD GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1926
SCALE AS NOTED
SHEET NO.

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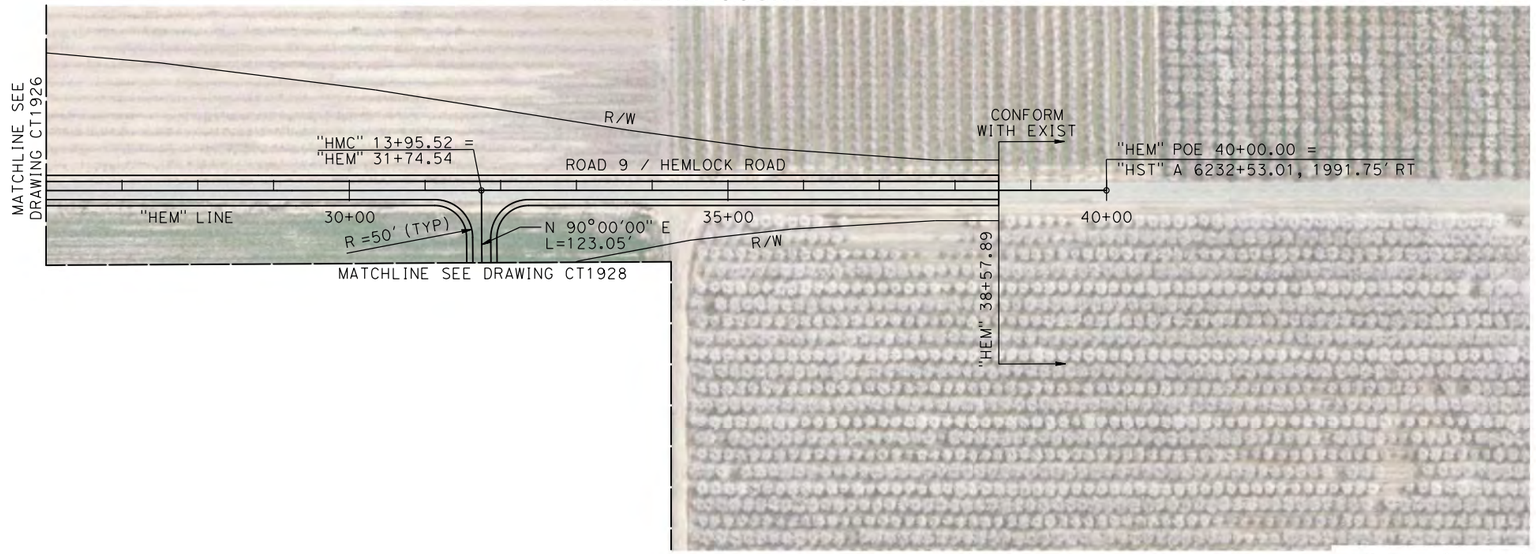
MADERA COUNTY



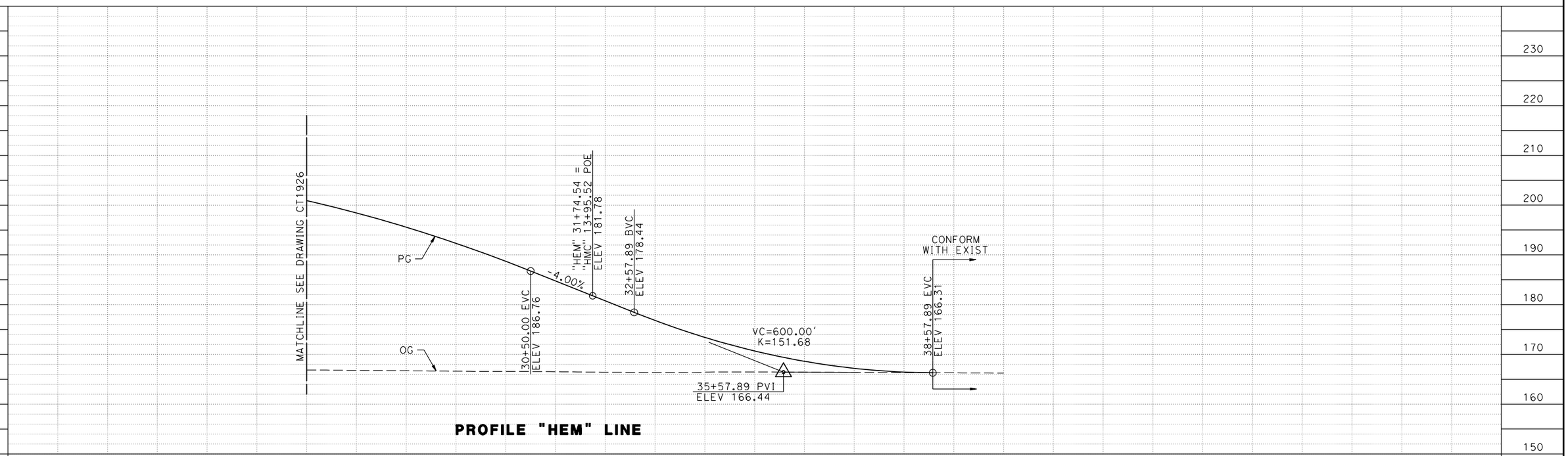
PLAN

NOTE:

1. SEE DRAWING CT1928 FOR DETAILS OF ROAD 9 / HEMLOCK ROAD TO AVENUE 21 CONNECTOR ROAD "HMC" LINE.

10 0 10 20 VERT: 1"=10'

100 0 100 200 HORIZ: 1"=100'



PROFILE "HEM" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 9 / HEMLOCK ROAD GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1927
SCALE AS NOTED
SHEET NO.

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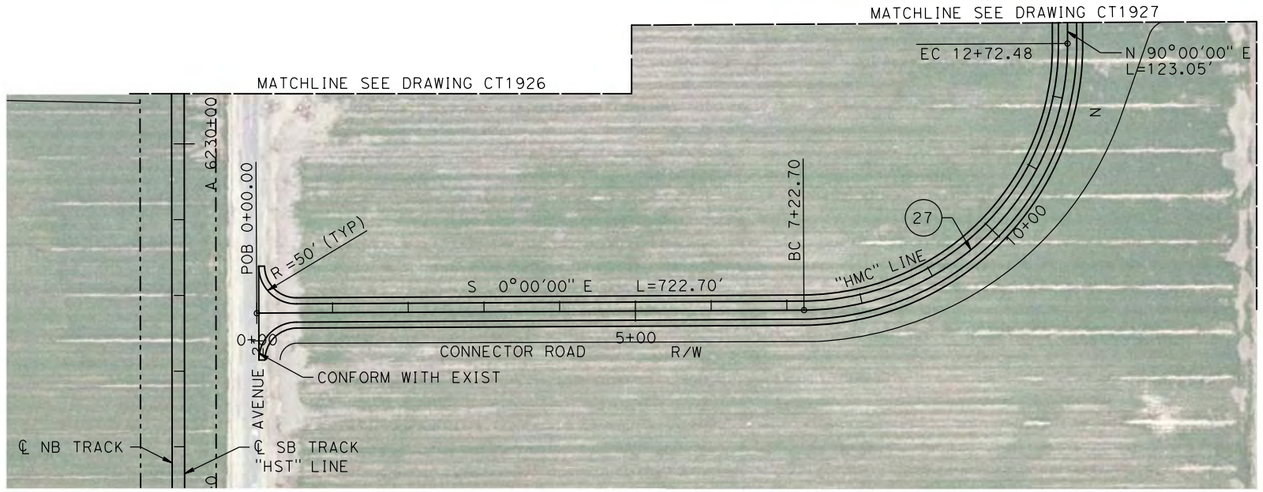
MADERA COUNTY



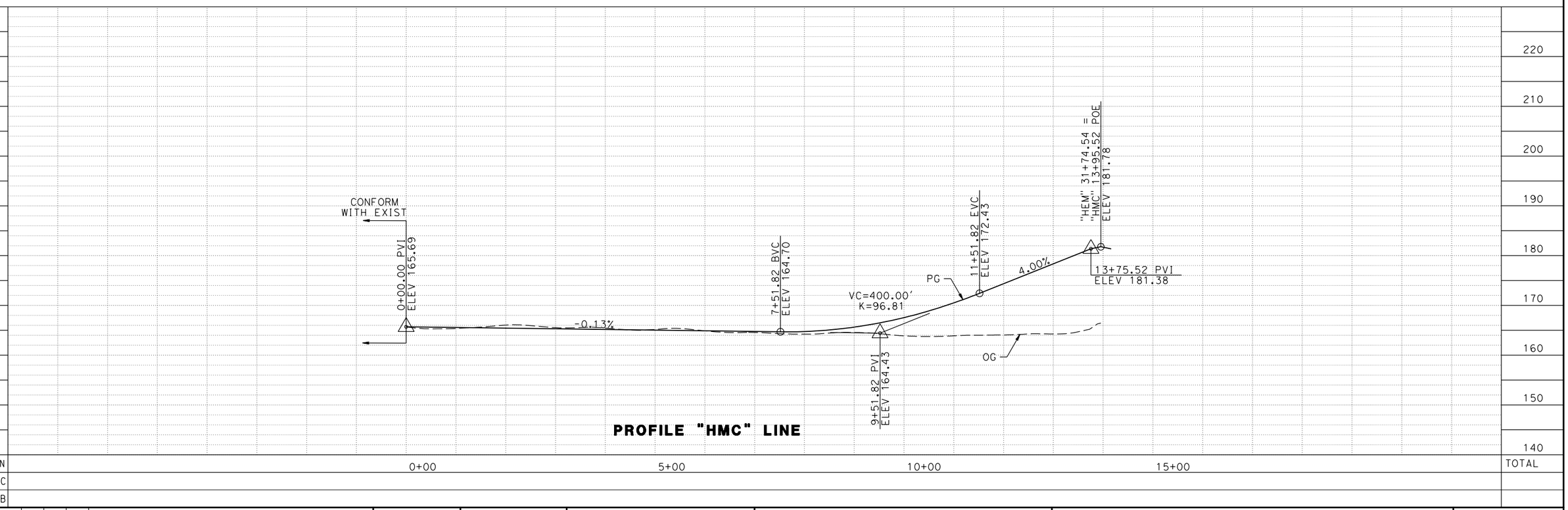
PLAN

NOTE:

1. SEE DRAWINGS CT1926 AND CT1927 FOR DETAILS OF ROAD 9 / HEMLOCK ROAD "HEM" LINE.

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "HMC" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 9 / HEMLOCK ROAD GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1928
SCALE AS NOTED
SHEET NO.

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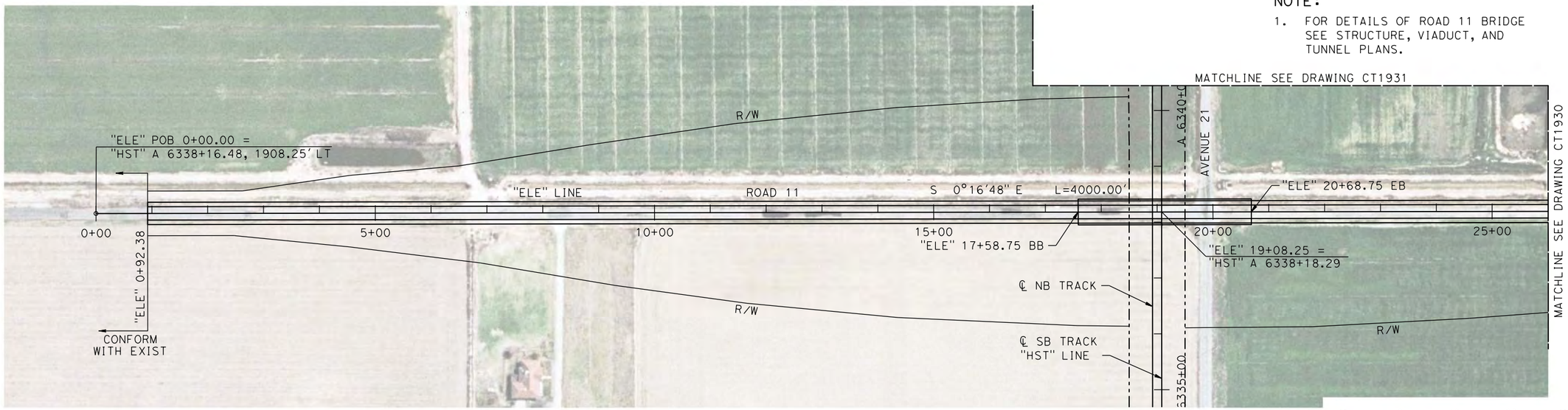
MADERA COUNTY

NOTE:

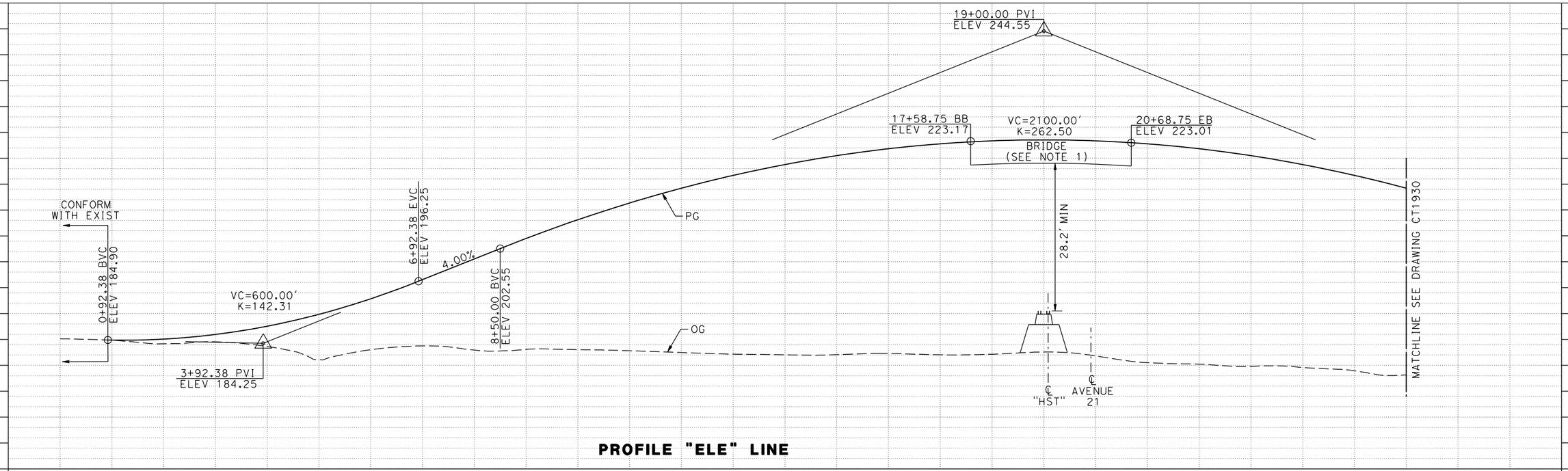
1. FOR DETAILS OF ROAD 11 BRIDGE SEE STRUCTURE, VIADUCT, AND TUNNEL PLANS.



PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "ELE" LINE

STATION	0+00	5+00	10+00	15+00	20+00	25+00	TOTAL
CY EXC							
CY EMB							

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

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PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 11 GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1929
SCALE AS NOTED
SHEET NO.

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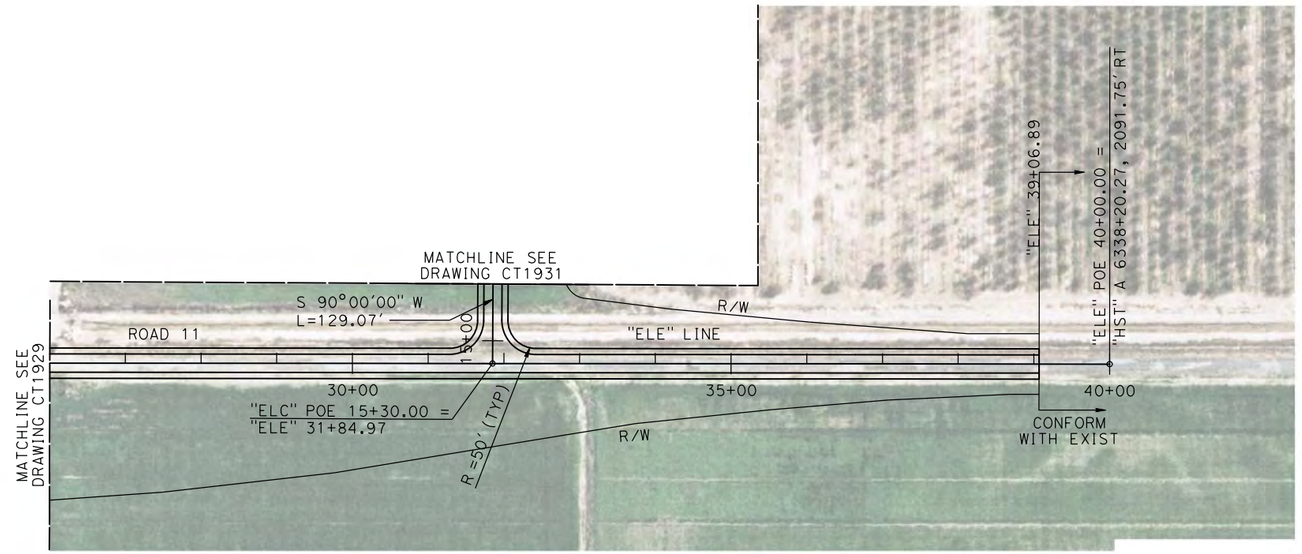
MADERA COUNTY

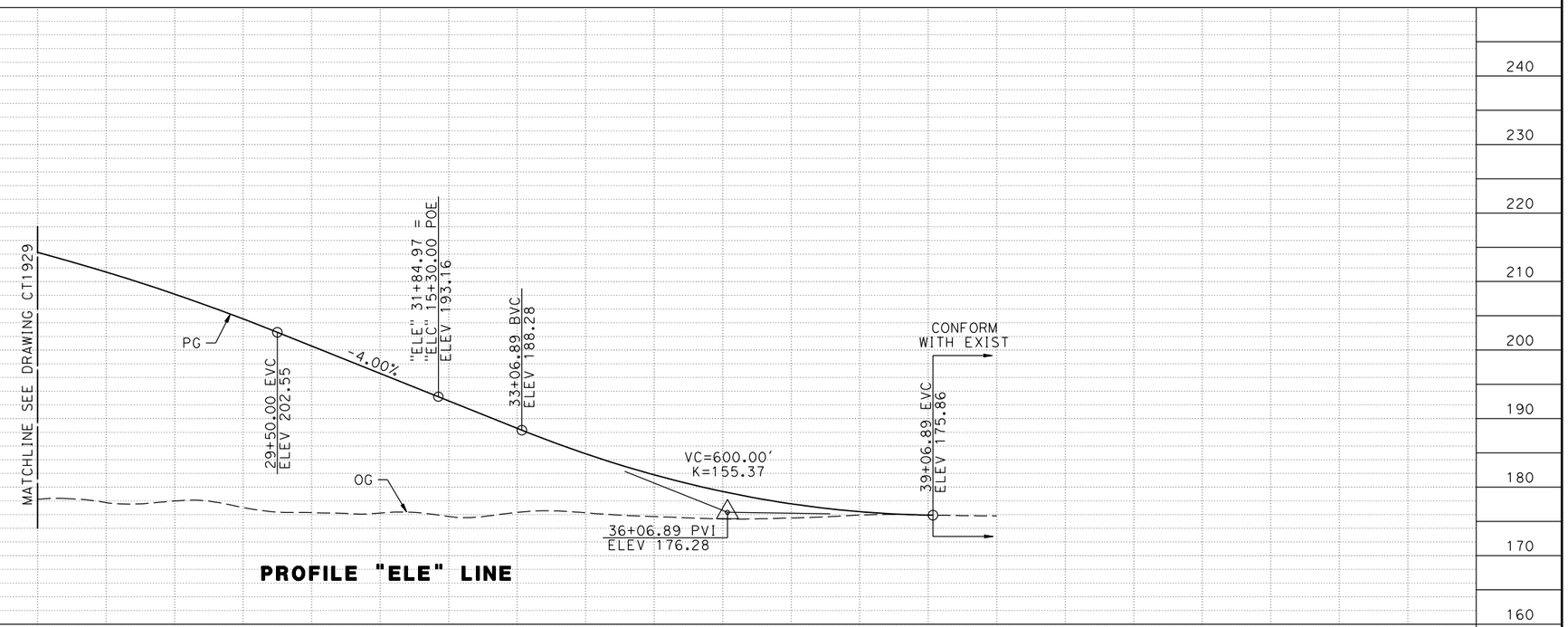


PLAN

NOTE:

1. SEE DRAWING CT1931 FOR DETAILS OF ROAD 11 TO AVENUE 21 CONNECTOR ROAD "ELC" LINE.

VERT: 1"=10' HORIZ: 1"=100'



PROFILE "ELE" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 11 GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1930
SCALE AS NOTED
SHEET NO.

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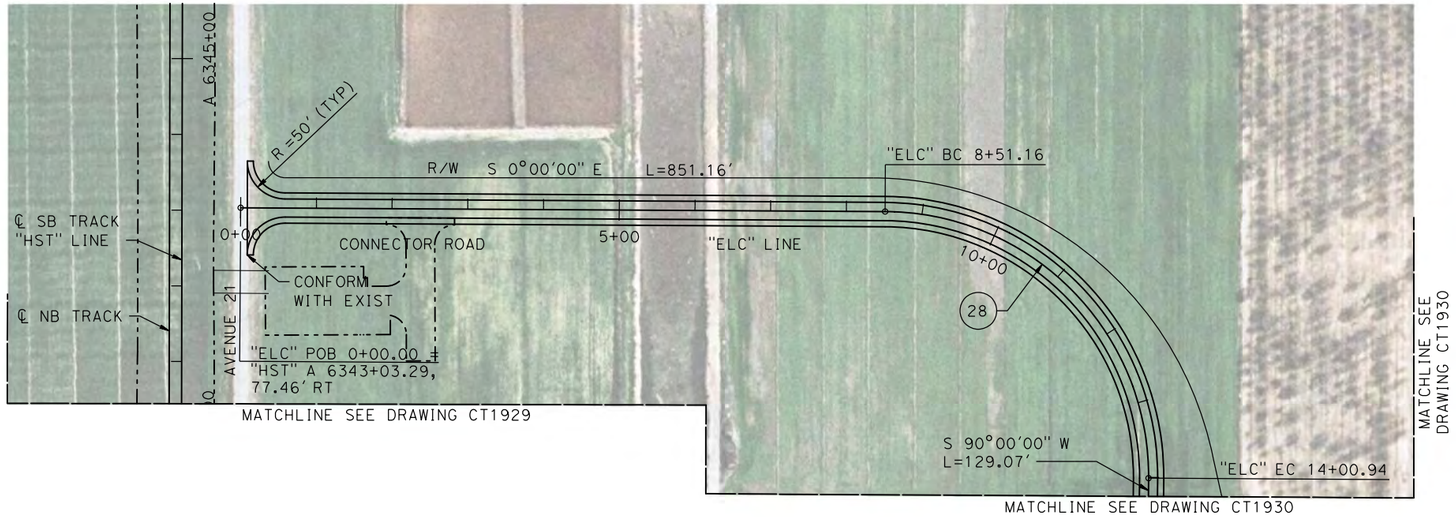
MADERA COUNTY



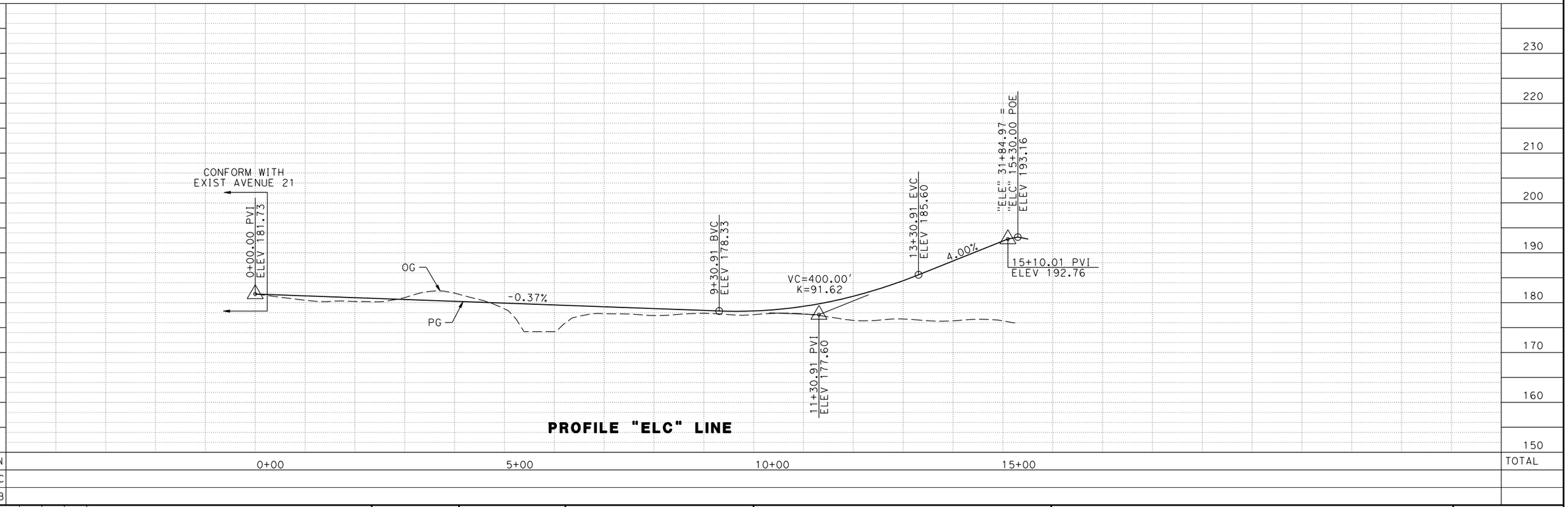
NOTE:

1. SEE DRAWINGS CT1929 AND CT1930 FOR DETAILS OF ROAD 11 "ELE" LINE.

PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "ELC" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 11 GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1931
SCALE AS NOTED
SHEET NO.

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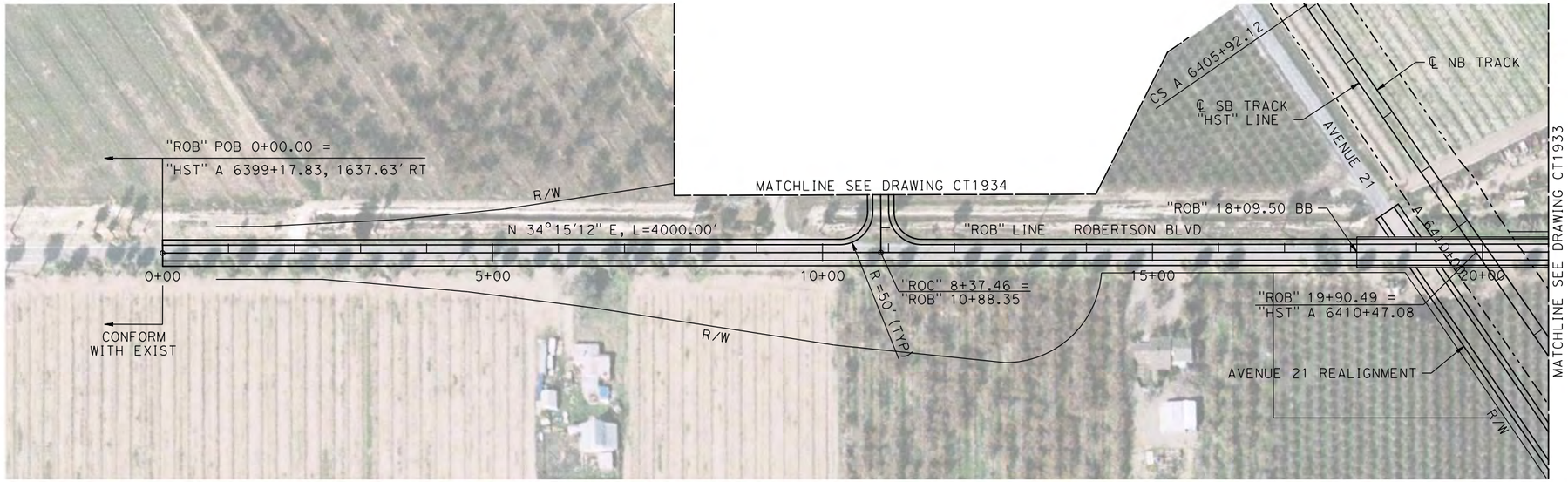
MADERA COUNTY



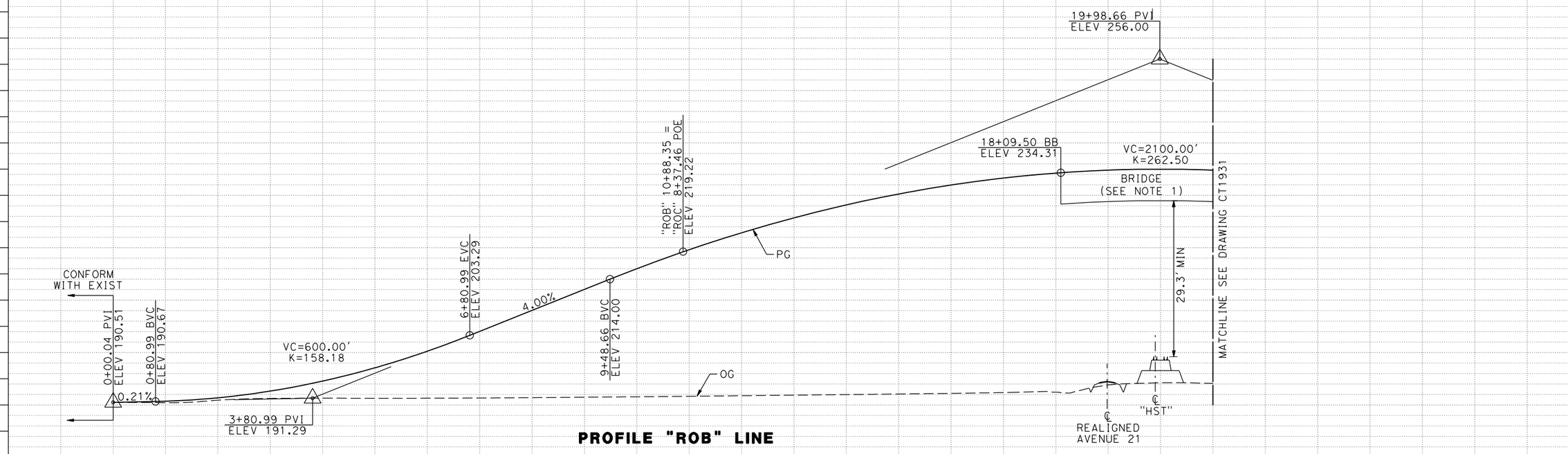
PLAN

NOTE:

1. FOR DETAILS OF ROBERTSON BLVD BRIDGE SEE STRUCTURE, VIADUCT, AND TUNNEL PLANS.
2. SEE DRAWING CT1934 FOR DETAILS OF ROBERTSON BLVD TO AVENUE 21 CONNECTOR ROAD "ROB" LINE.

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "ROB" LINE

STATION	0+00	5+00	10+00	15+00	20+00	TOTAL
CY EXC						
CY EMB						

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

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PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROBERTSON BLVD GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1932
SCALE AS NOTED
SHEET NO.

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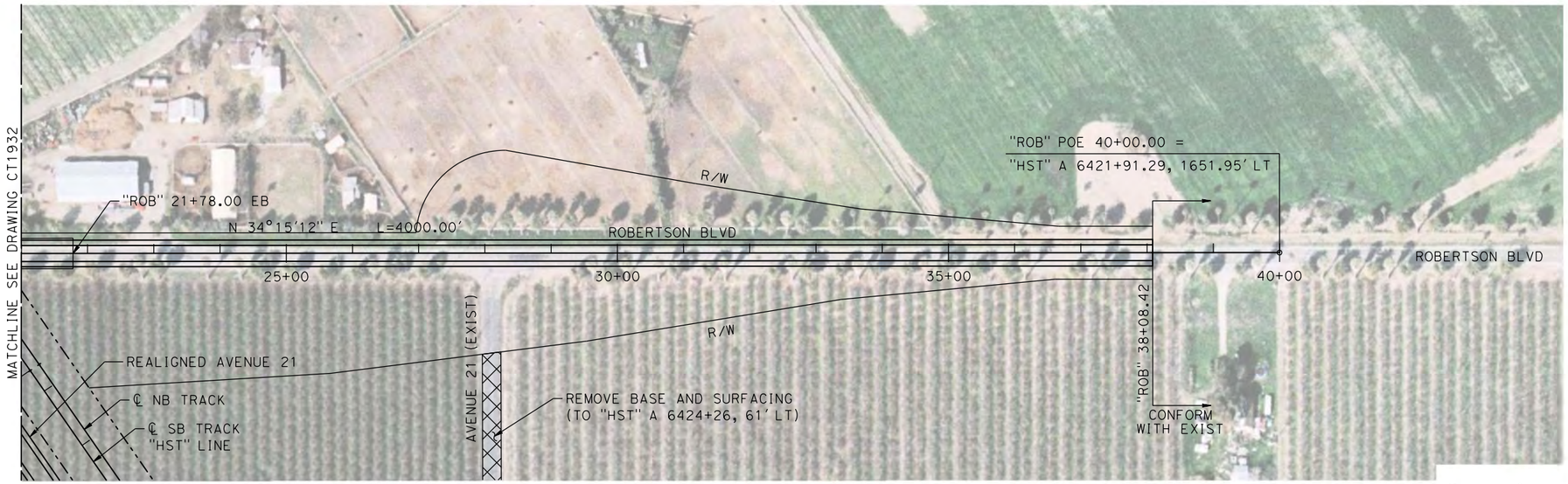
MADERA COUNTY



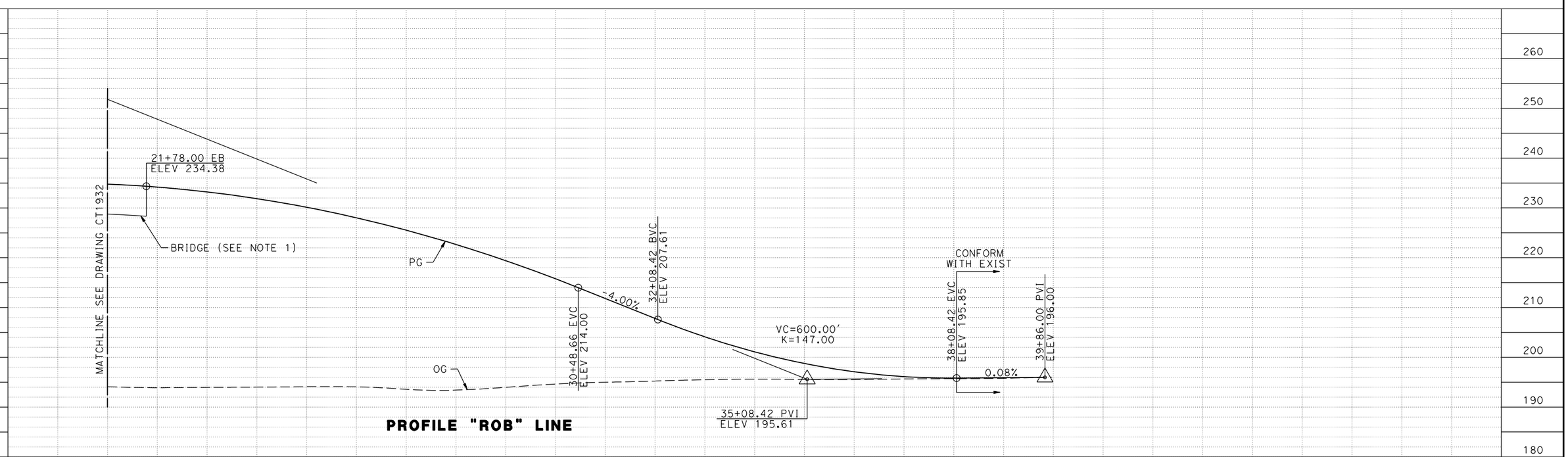
NOTE:

1. FOR DETAILS OF ROBERTSON BLVD BRIDGE SEE STRUCTURE, VIADUCT AND TUNNEL PLANS.

PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "ROB" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

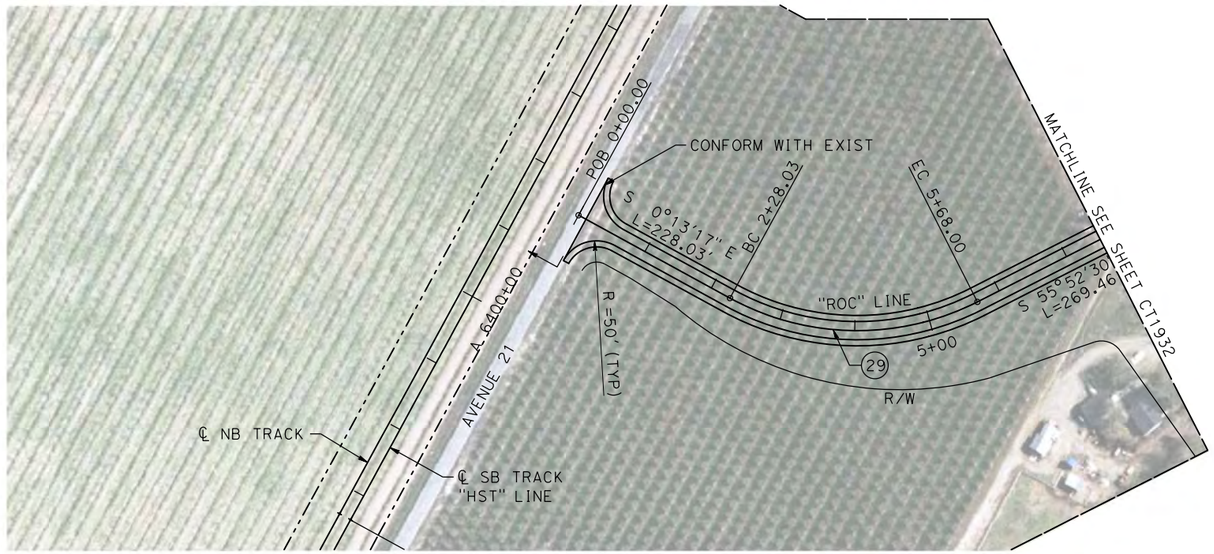
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROBERTSON BLVD GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1933
SCALE AS NOTED
SHEET NO.

p0039764 7/20/2011 4:26:22 PM c:\pw_working\prtgpwiseb\p0039764\dms66815\JM-CT-1933-VA.dgn

MADERA COUNTY



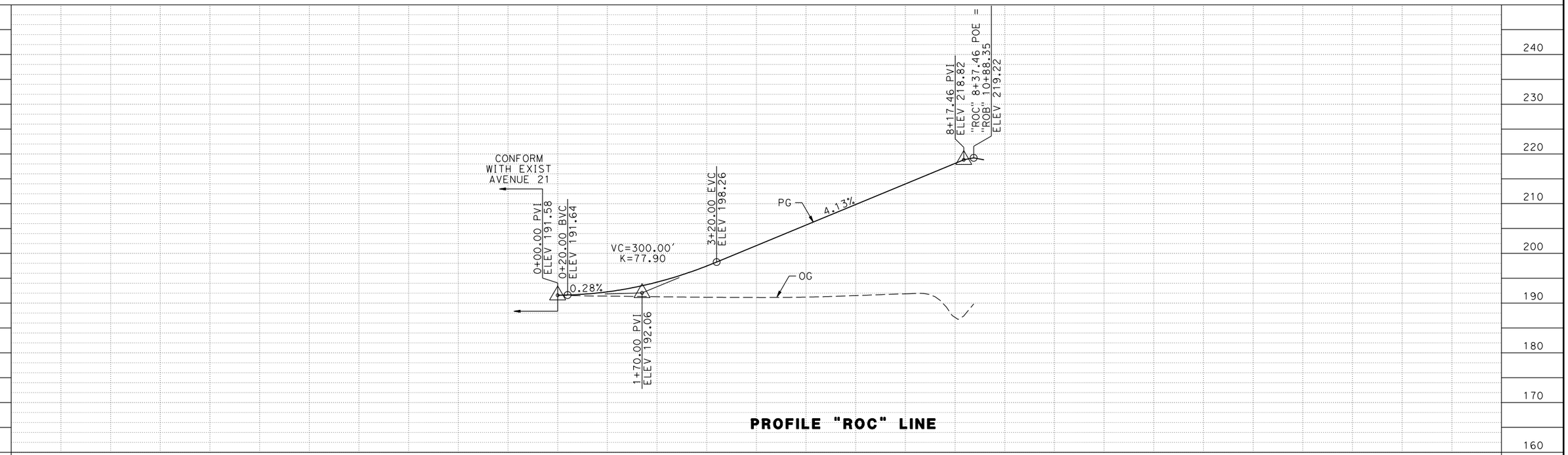
PLAN

NOTE:

1. SEE DRAWINGS CT1932 AND CT1933 FOR DETAILS OF ROBERTSON BLVD "ROB" LINE.

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "ROC" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROBERTSON BLVD GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1934
SCALE AS NOTED
SHEET NO.

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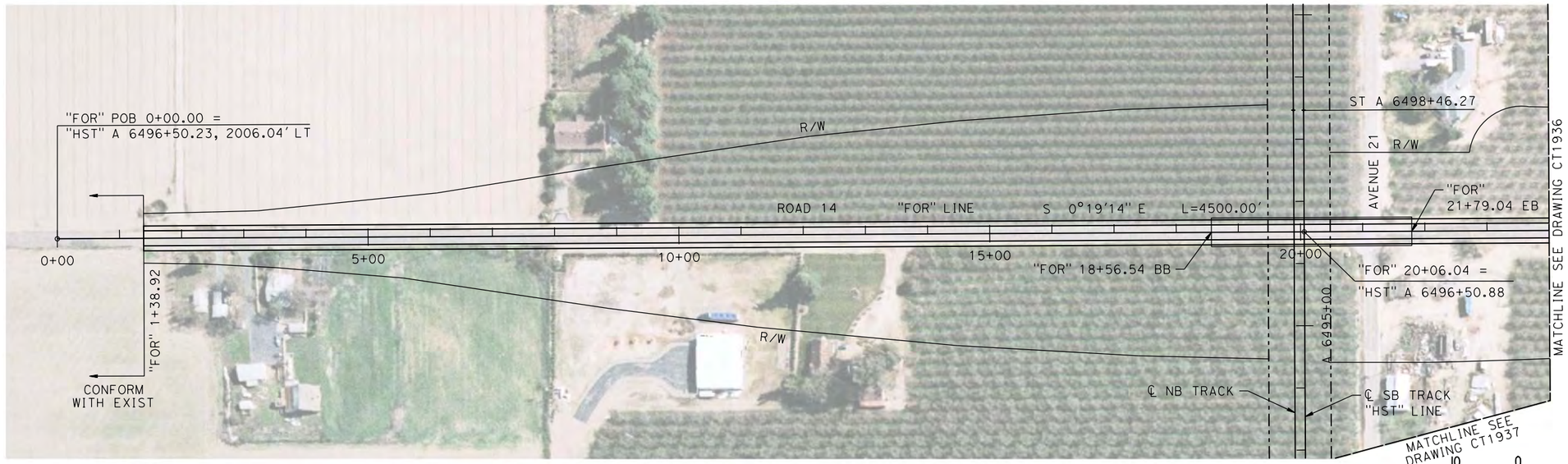
MADERA COUNTY

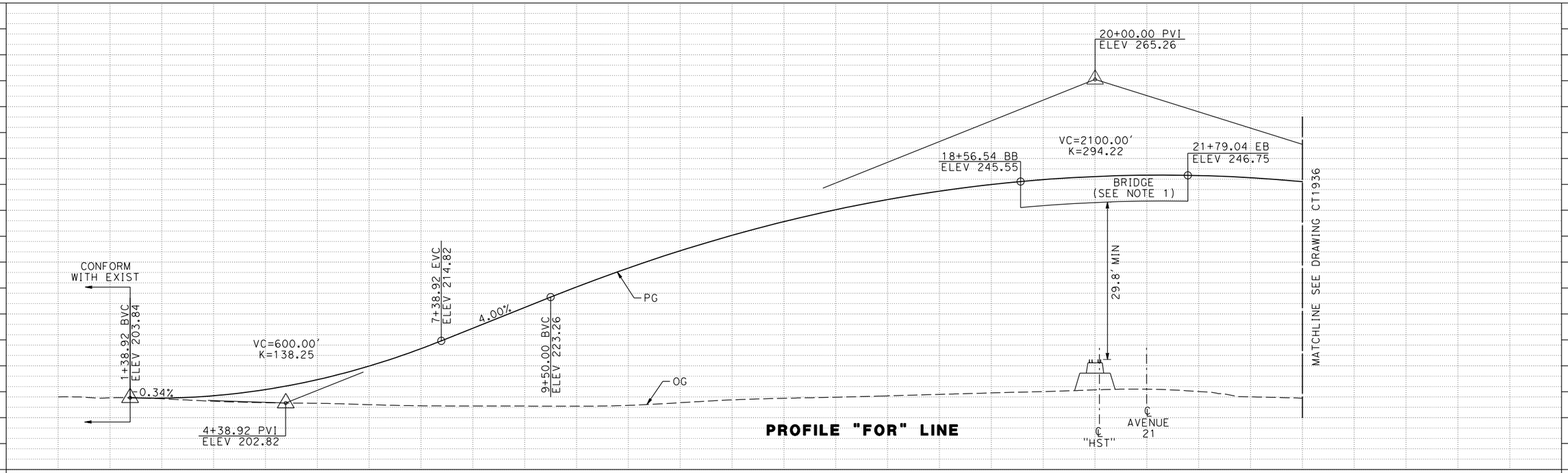


NOTE:

1. FOR DETAILS OF ROAD 14 BRIDGE SEE STRUCTURE, VIADUCT, AND TUNNEL PLANS.

PLAN

VERT: 1"=10' HORIZ: 1"=100'



PROFILE "FOR" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 14 GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1935
SCALE AS NOTED
SHEET NO.

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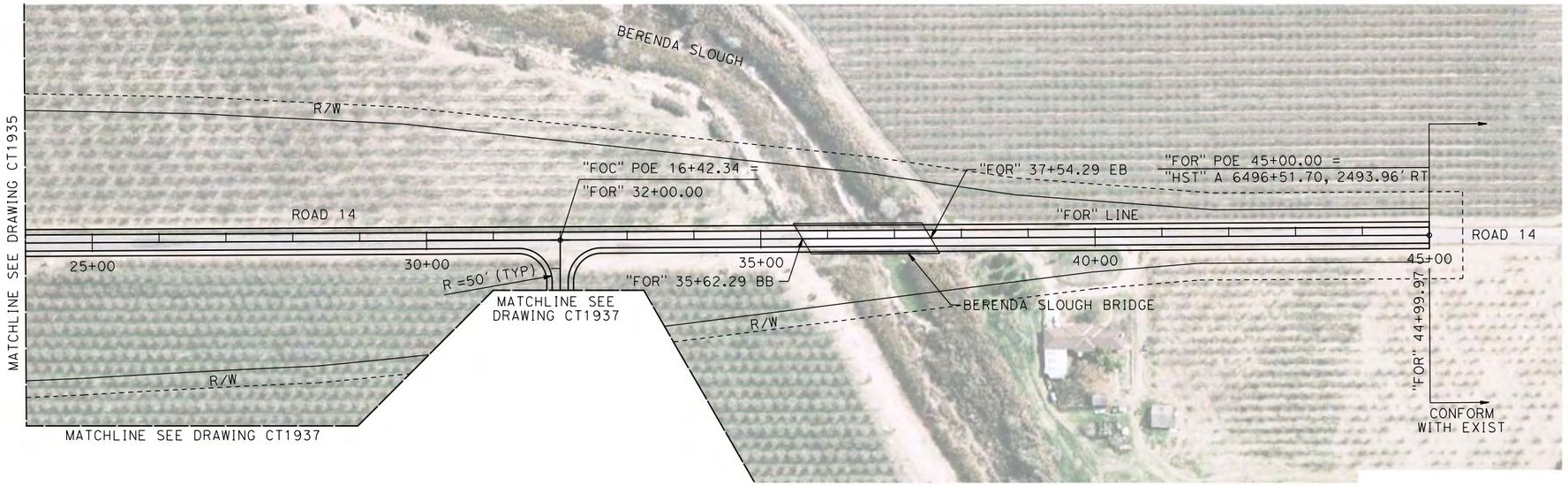
MADERA COUNTY



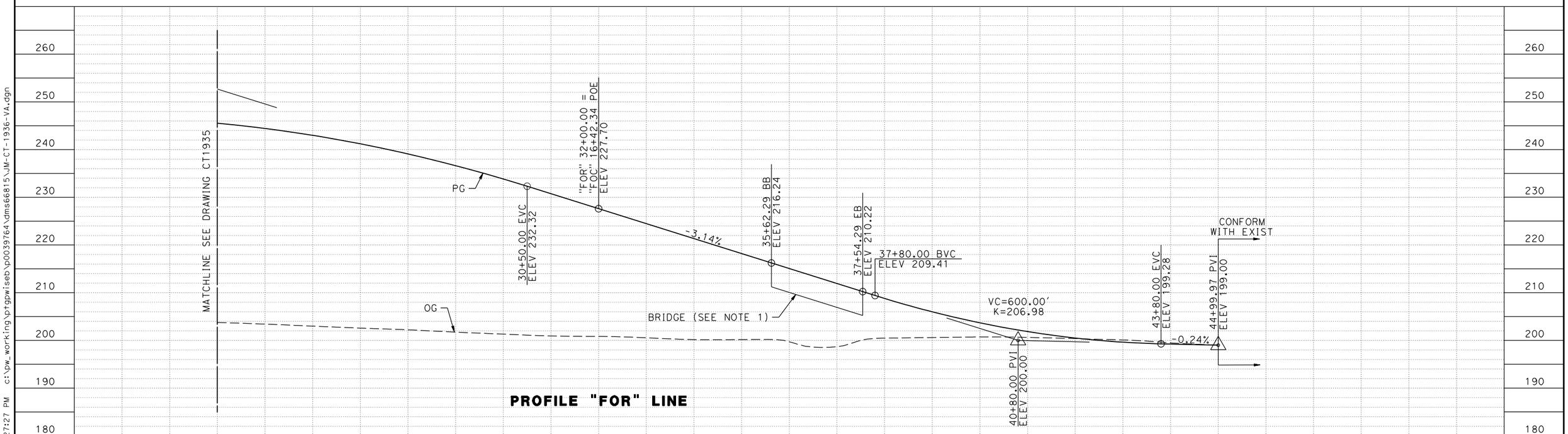
NOTE:

1. FOR BERENDA SLOUGH BRIDGE SEE STRUCTURE, VIADUCT, AND TUNNEL PLANS.
2. SEE DRAWING CT1937 FOR DETAILS OF ROAD 14 TO AVENUE 21 CONNECTOR ROAD "FOC" LINE.

PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "FOR" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 14 GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1936
SCALE AS NOTED
SHEET NO.

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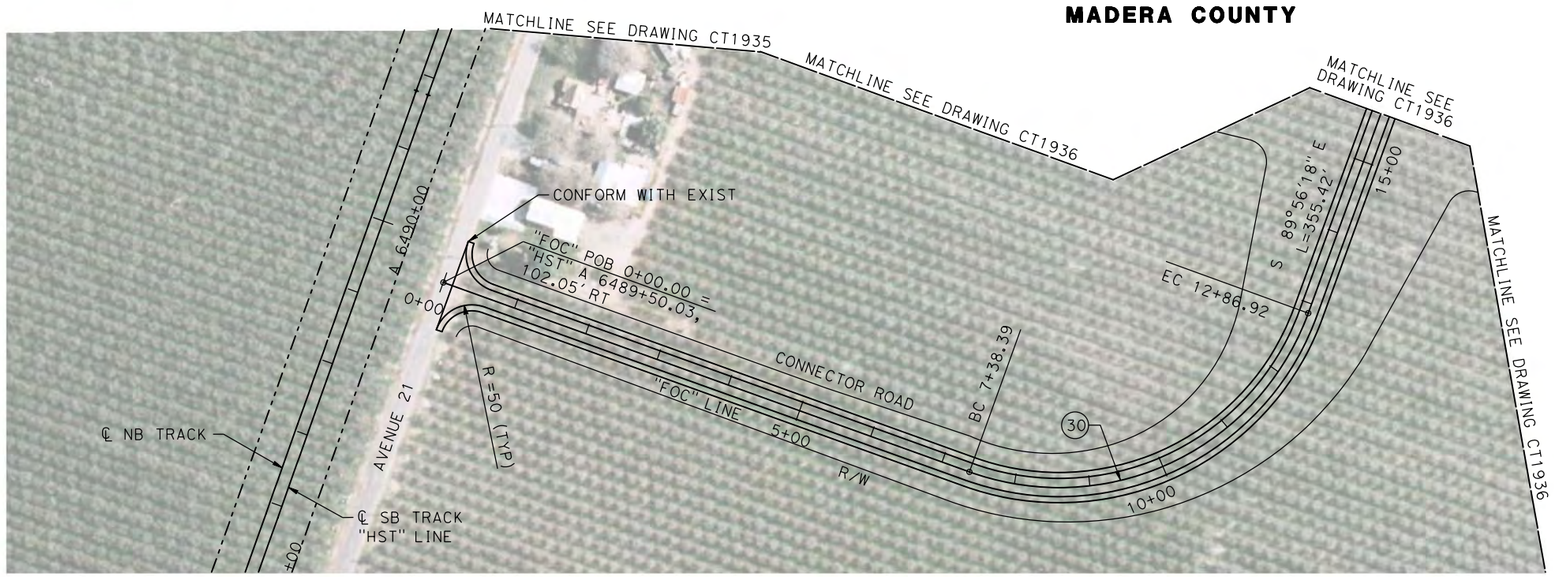
MADERA COUNTY

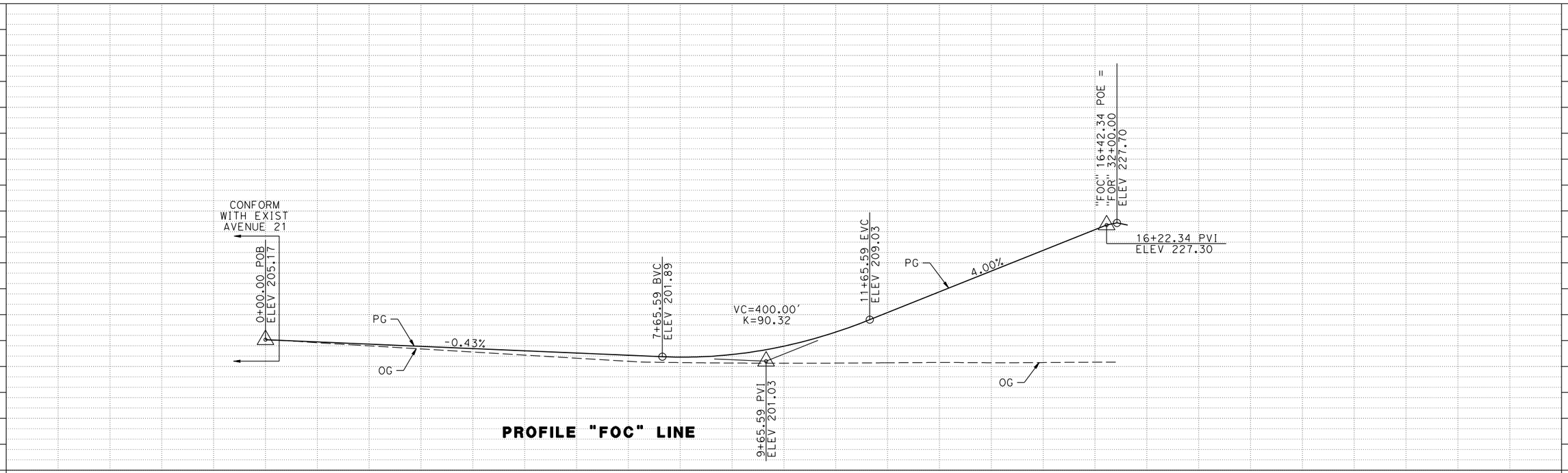


PLAN

NOTE:

1. SEE DRAWINGS CT1935 AND CT1936 FOR DETAILS OF ROAD 14 "FOR" LINE.

VERT: 1"=10' HORIZ: 1"=100'



PROFILE "FOC" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. S. M.
DRAWN BY R. BROWNE
CHECKED BY M. SANTOS
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
PLAN AND PROFILE
ROAD 14 GRADE SEPARATION

CONTRACT NO. HSR08-05
DRAWING NO. CT1937
SCALE AS NOTED
SHEET NO.

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SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	SHEET TITLE LINE 5	SHEET TITLE LINE 6
		ROADWAY BRIDGE STRUCTURE PLAN			
		HYBRID ALTERNATIVE/AVENUE 21			
		GENERAL			
	SB1501	HYBRID ALTERNATIVE	AVENUE 21	INDEX OF DRAWINGS	SHEET 1 OF 1
	SB1502	HYBRID ALTERNATIVE	AVENUE 21	STRUCTURE INDEX MAP	SHEET 1 OF 1
		OVERHEAD BRIDGES			
	ST1070	BNSF MAIN LINE - HYBRID	AVENUE 24	AVENUE 7 OVERHEAD	PLANNING STUDY
	ST1001	BNSF MAIN LINE - HYBRID	AVENUE 24	AVENUE 9 OVERHEAD	PLANNING STUDY
	ST1002	BNSF MAIN LINE - HYBRID	AVENUE 24	AVENUE 10 OVERHEAD	PLANNING STUDY
	ST1003	BNSF MAIN LINE - HYBRID	AVENUE 24	AVENUE 11 OVERHEAD	PLANNING STUDY
	ST1004	BNSF MAIN LINE - HYBRID	AVENUE 24	AVENUE 12 OVERHEAD	PLANNING STUDY
	ST1005	BNSF MAIN LINE - HYBRID	AVENUE 24	AVENUE 13 OVERHEAD	PLANNING STUDY-SHEET 1 OF 2
	ST1005A	BNSF MAIN LINE - HYBRID	AVENUE 24	AVENUE 13 OVERHEAD	PLANNING STUDY-SHEET 2 OF 2
	ST1006	BNSF MAIN LINE - HYBRID	AVENUE 24	AVENUE 15 OVERHEAD	PLANNING STUDY
	ST1007	BNSF MAIN LINE - HYBRID	AVENUE 24	AVENUE 15½ OVERHEAD	PLANNING STUDY
	ST1009	BNSF MAIN LINE - HYBRID	AVENUE 24	AVENUE 17 OVERHEAD	PLANNING STUDY
	ST1010	BNSF MAIN LINE - HYBRID	AVENUE 24	ROAD 27 OVERHEAD	PLANNING STUDY
	ST1011	HYBRID MAIN LINE	AVENUE 24	ROAD 26 OVERHEAD	PLANNING STUDY
	ST1090	HYBRID MAIN LINE	AVENUE 21	AVENUE 20 OVERHEAD	PLANNING STUDY
	ST1091	HYBRID MAIN LINE	AVENUE 21	AVENUE 20½OVERHEAD	PLANNING STUDY
	ST1092	BNSF MAIN LINE - HYBRID	AVENUE 21	ROAD 22 OVERHEAD	PLANNING STUDY
	ST1026	BNSF MAIN LINE - HYBRID	AVENUE 21	ROAD 20 OVERHEAD	PLANNING STUDY
	ST1027	BNSF MAIN LINE - HYBRID	AVENUE 21	ROAD 18½ OVERHEAD	PLANNING STUDY
	ST1102	BNSF MAIN LINE - HYBRID	AVENUE 21	ROAD 17½ OVERHEAD	PLANNING STUDY-SHEET 1 OF 2
	ST1101	BNSF MAIN LINE / UPRR/SR 99 WYE CONNECTION - HYBRID	AVENUE 21	ROAD 16 OVERHEAD	PLANNING STUDY
	ST1180	UPRR/SR 99 MERCED CONNECTION - HYBRID	AVENUE 21	G STREET OVERHEAD	PLANNING STUDY
	ST1106	UPRR/SR 99 WYE CONNECTION - HYBRID	AVENUE 21	AVENUE 22 OVERHEAD	PLANNING STUDY
	ST1115	UPRR/SR 99 WYE CONNECTION - HYBRID	AVENUE 21	AVENUE 21½ OVERHEAD	PLANNING STUDY
	ST1103	UPRR/SR 99 WYE CONNECTION - HYBRID	AVENUE 21	ROAD 17½ OVERHEAD	PLANNING STUDY-SHEET 2 OF 2

REV	DATE	BY	CHK	APP	DESCRIPTION
2	02/24/12	HL	EC	AB	
1	12/28/11	HL	EC	AB	

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY J. Renteria
IN CHARGE A. Boone
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

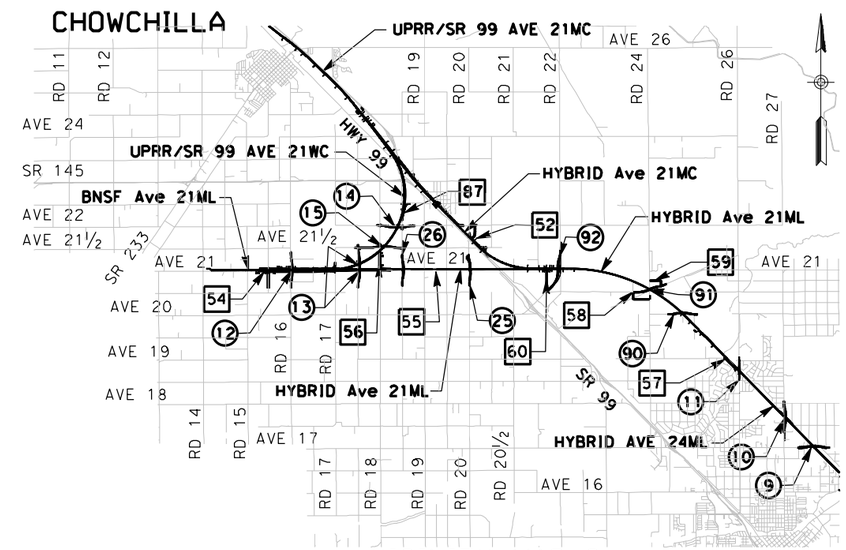
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID ALTERNATIVE
AVENUE 21
INDEX OF DRAWINGS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. SB1501
SCALE No scale
SHEET NO. OF

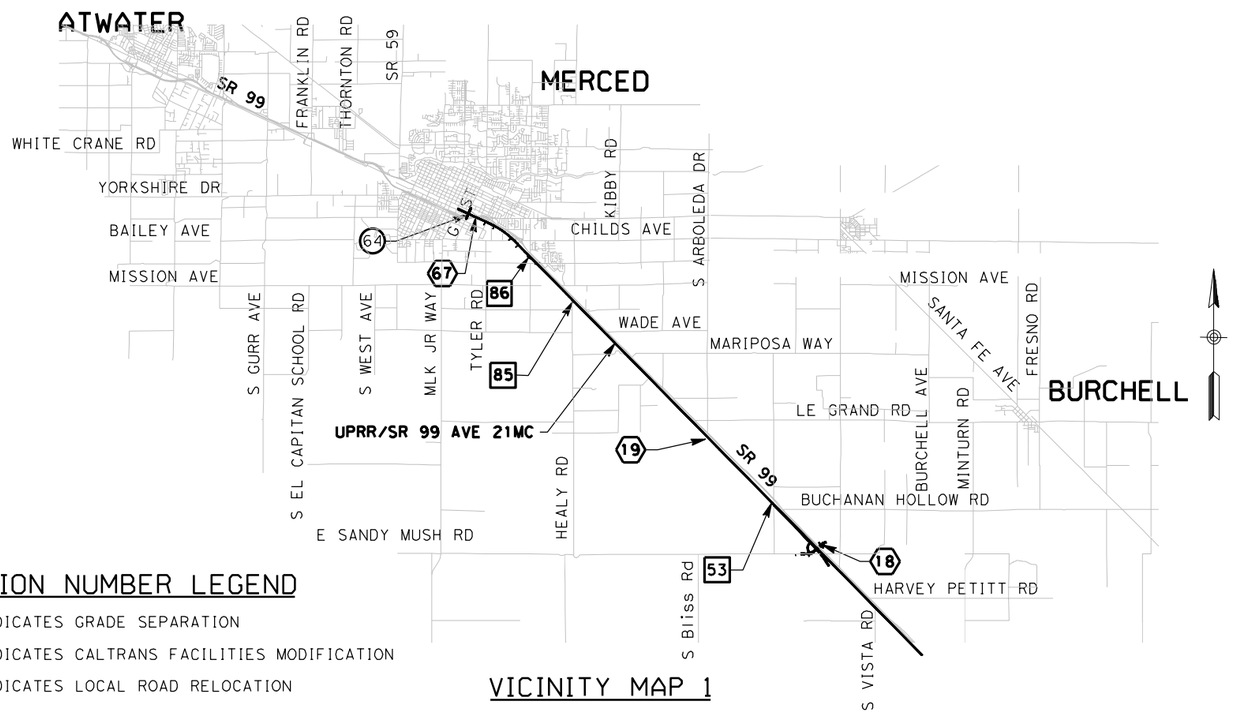
3/30/2012 3:30:27 PM \\uscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\cadd\Struct\Sheet\15%_Grade Structures_Revisions\WF-SB-1501.dgn
cisnerose

LOCATION NO.	SHEET TITLE	STRUCTURE DWG NO.	ROADWAY DWG NO.
1	GRADE SEPARATION - AVENUE 9	ST1001	CT0001-A - CT0003-A
2	GRADE SEPARATION - AVENUE 10	ST1002	CT0004-A - CT0006-A
3	GRADE SEPARATION - AVENUE 11	ST1003	CT0007-A - CT0009-A
4	GRADE SEPARATION - AVENUE 12	ST1004	CT0010-A - CT0012-A
5	GRADE SEPARATION - AVENUE 13	ST1005 & ST1005A	CT0013-A - CT0016-A
6	GRADE SEPARATION - AVENUE 15	ST1006	CT0017-A - CT0019-A
7	GRADE SEPARATION - AVENUE 15½	ST1007	CT0020-A - CT0022-A
8	GRADE SEPARATION - RAYMOND RD	ST1008	CT0023-A - CT0025-A
9	GRADE SEPARATION - AVENUE 17	ST1009	CT0026-A - CT0028-A
10	GRADE SEPARATION - ROAD 27	ST1010	CT0029-A - CT0031-A
11	GRADE SEPARATION - ROAD 26	ST1011	CT0032-A - CT0034-A
12	GRADE SEPARATION - ROAD 16	ST1101	CT5000-B - CT5003-B
13	GRADE SEPARATION - ROAD 17½	ST1102 - ST1103	CT5004-B - CT5007-B
14	GRADE SEPARATION - AVENUE 22	ST1106	CT5016-B - CT5018-B
15	GRADE SEPARATION - AVENUE 21½	ST1115	CT5019-B - CT5022-B
25	GRADE SEPARATION - ROAD 20	ST1026	CT0076-A - CT0078-A
26	GRADE SEPARATION - ROAD 18½	ST1027	CT0079-A - CT0081-A
64	GRADE SEPARATION - G STREET	ST1180	CT0149-A

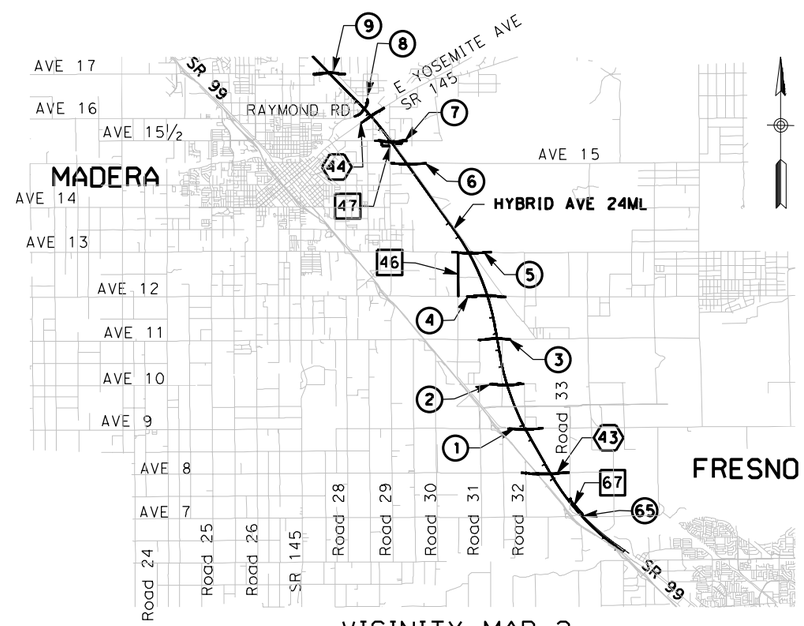
LOCATION NO.	SHEET TITLE	STRUCTURE DWG NO.	ROADWAY DWG NO.
65	GRADE SEPARATION - AVENUE 7	ST1070	CT0146-A - CT0148-A
90	GRADE SEPARATION - AVENUE 20	ST1090	CT0066-A - CT0068-A
91	GRADE SEPARATION - AVENUE 20½	ST1091	CT0069-A - CT0071-A
92	GRADE SEPARATION - ROAD 22	ST1092	CT0073-A - CT0075-A
18	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	ST1113	CT7034-B - CT7036-B
19	GRADE SEPARATION - LE GRAND RD INTERCHANGE	ST1114	CT7037-B - CT7043-B
43	CALTRANS - AVENUE 8	ST1000	CT2000-A - CT2003-A
67	CALTRANS - SR 99	ST1181	



VICINITY MAP 2



VICINITY MAP 1



VICINITY MAP 3

9000 0 9000 18000
GRAPHIC SCALE

LOCATION NUMBER LEGEND

- (X) - INDICATES GRADE SEPARATION
- ⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION
- [X] - INDICATES LOCAL ROAD RELOCATION

REV	DATE	BY	CHK	APP	DESCRIPTION
2	02/24/12	HL	EC	AB	
1	12/28/11	HL	EC	AB	

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY D. Ayele
IN CHARGE A. Boone
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID ALTERNATIVE
AVENUE 21
STRUCTURE INDEX MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. SB1502
SCALE As shown
SHEET NO. ### OF

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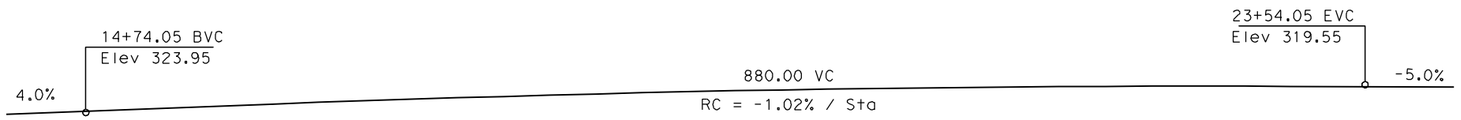
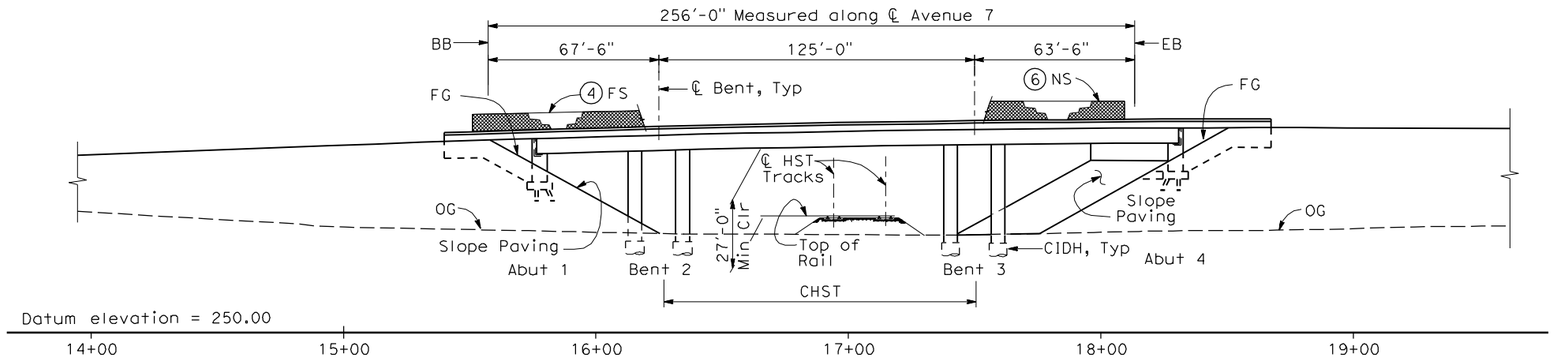
cisnerose



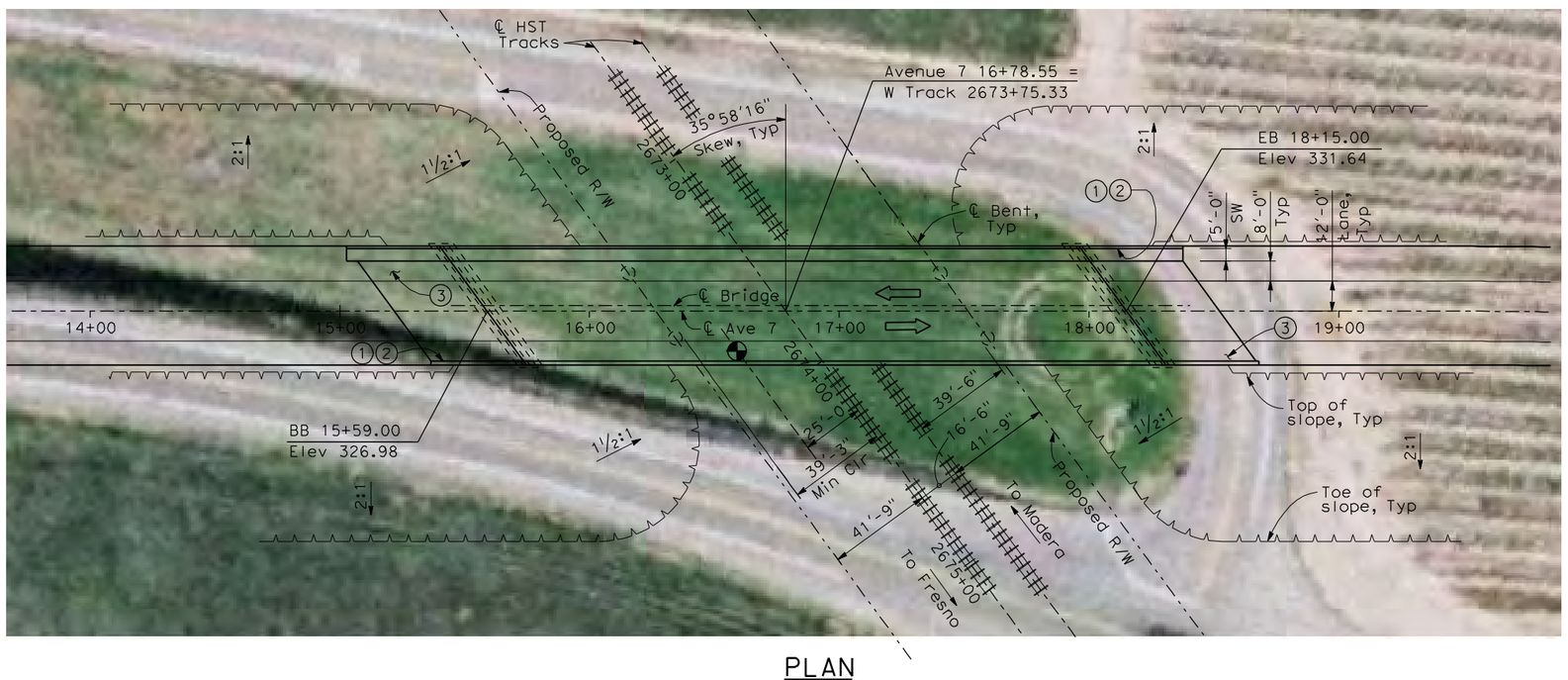
PROFILE GRADE

NTS



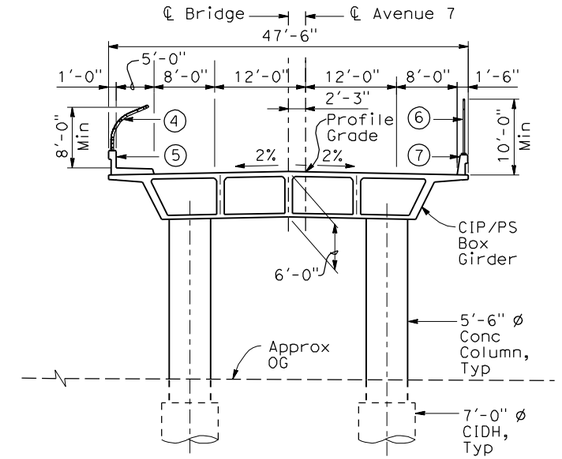
ELEVATION

1" = 30'-0"



PLAN

1" = 30'-0"



TYPICAL SECTION

1"=10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 7 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 7 to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

Direction of traffic

Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	256'-0"
WIDTH	=	47'-6"
AREA	=	12,160 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 65

30 0 30 60

1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY J. HODELL
CHECKED BY L. LEUNG
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 24
AVENUE 7 OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1070
SCALE As shown
SHEET NO. OF

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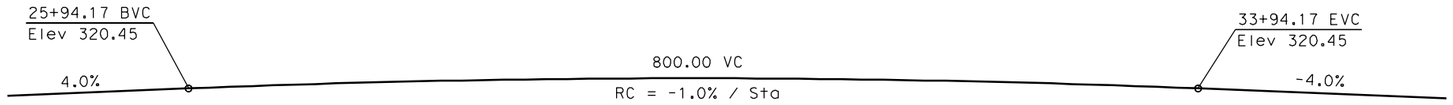
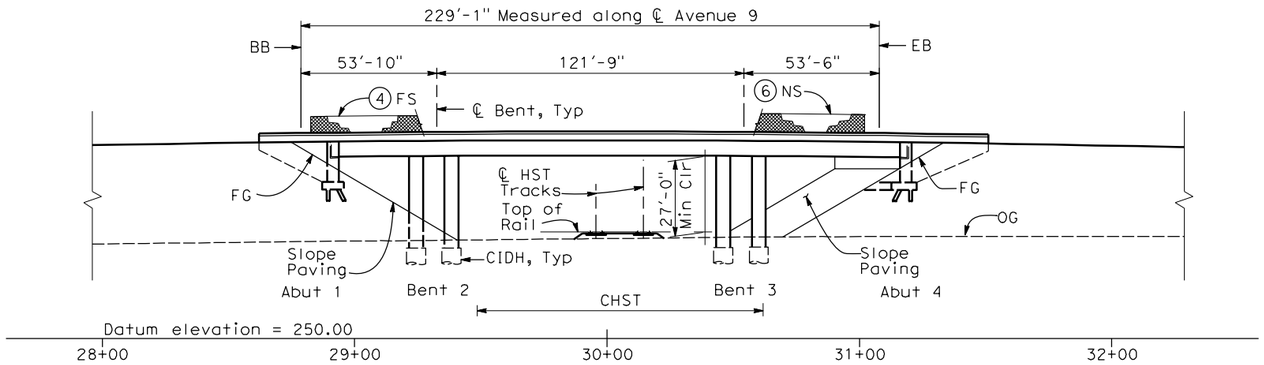
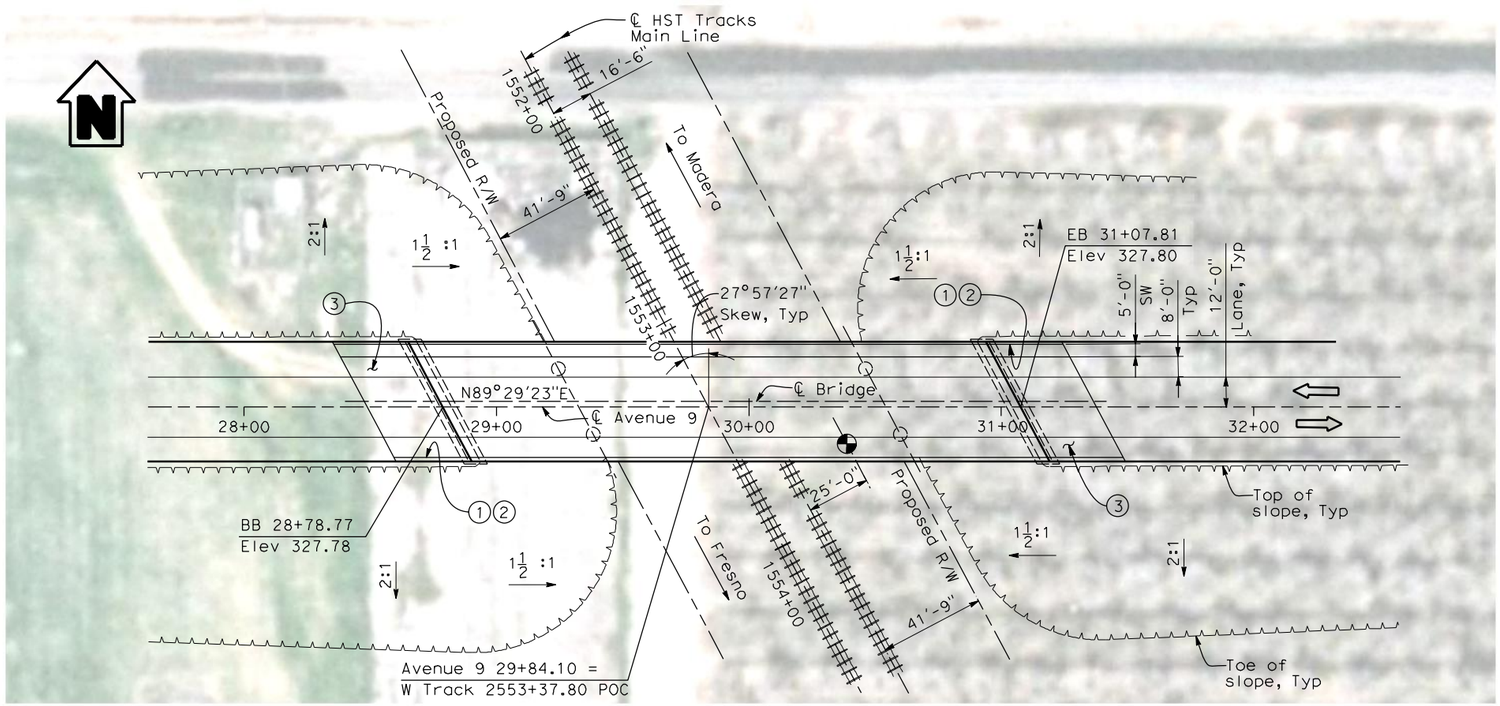


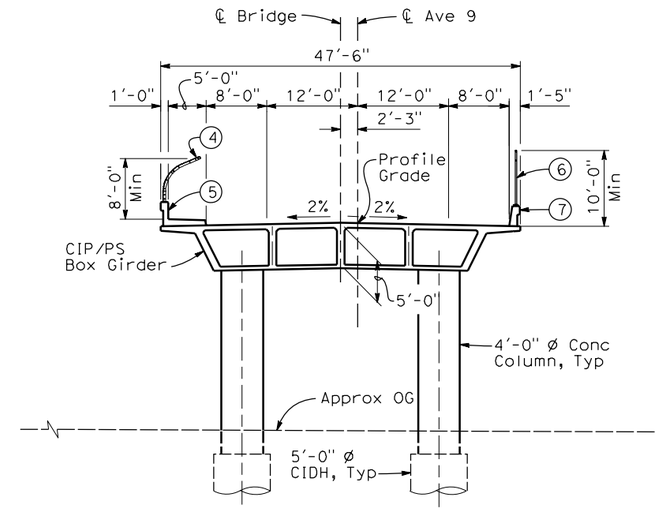
PROFILE GRADE
NTS



ELEVATION
1" = 30'-0"



PLAN
1" = 30'-0"



TYPICAL SECTION
1" = 10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 9 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 9 to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

Direction of traffic

Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	229'-1"
WIDTH	=	47'-6"
AREA	=	10,880 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 1

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

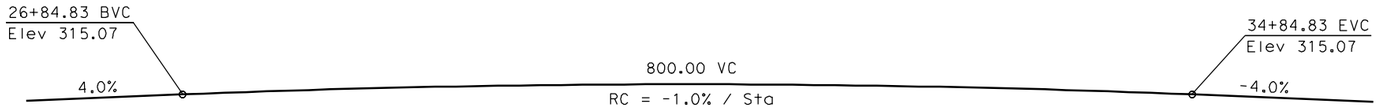
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 24
AVENUE 9 OVERHEAD
PLANNING STUDY

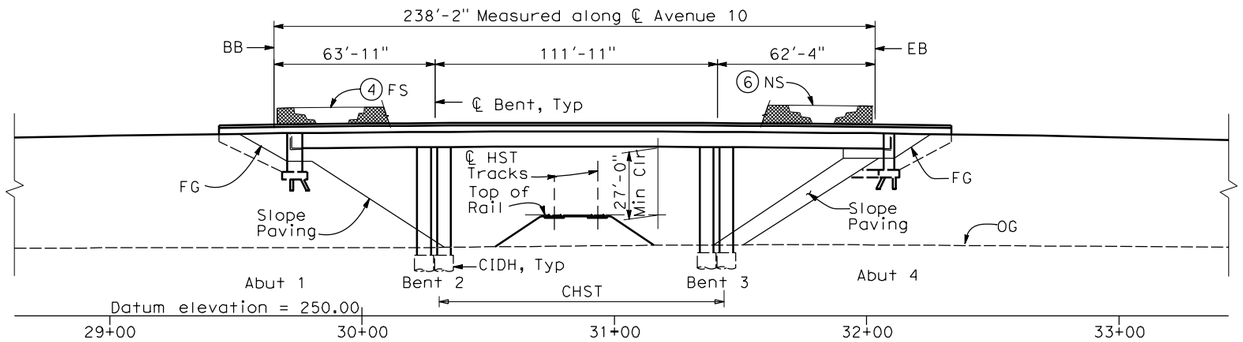
CONTRACT NO. HSR06-007
DRAWING NO. ST1001
SCALE As shown
SHEET NO. OF

3/30/2012 3:49:40 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\W-MF-ST-OH_Ave 9H.dgn
cisnerose



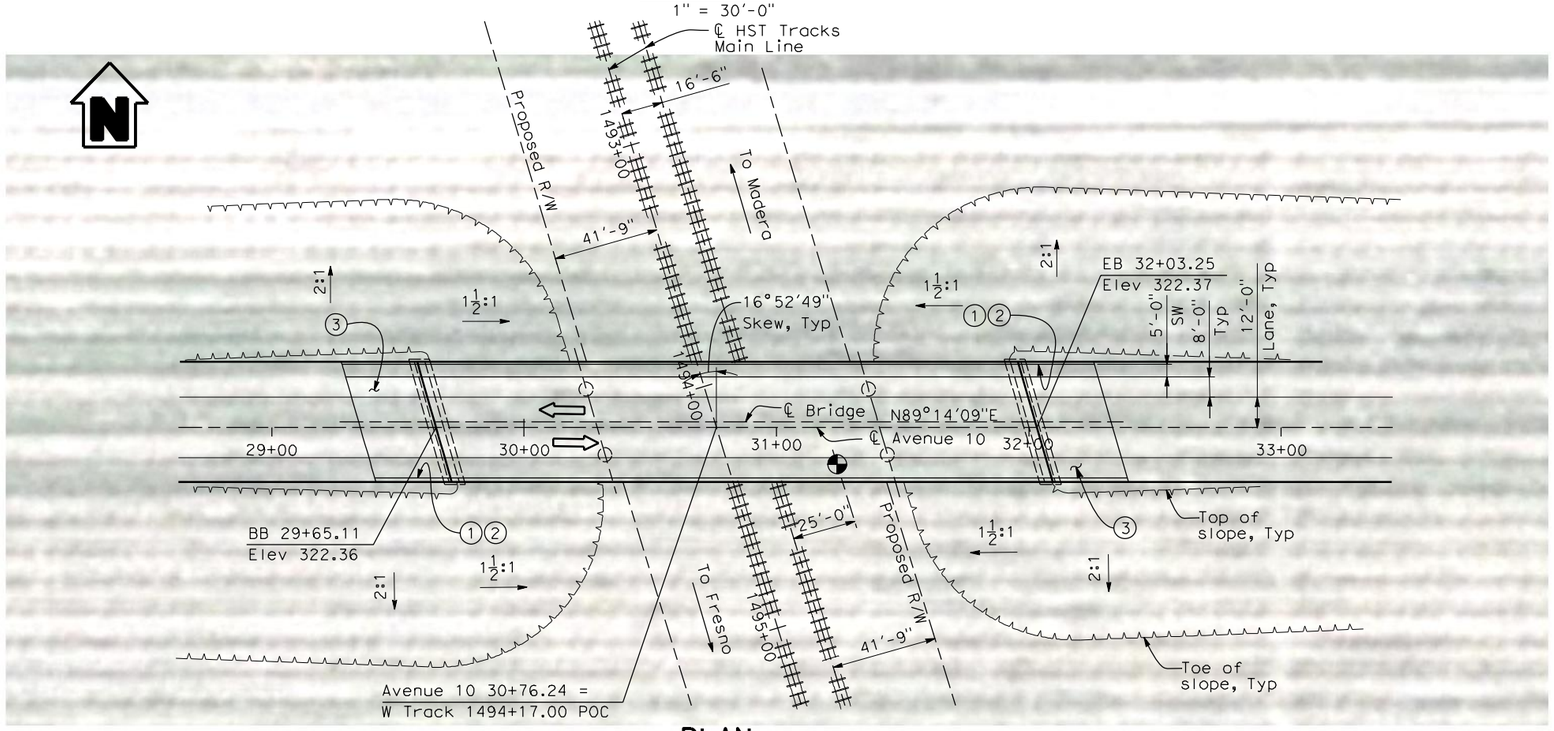
PROFILE GRADE

NTS



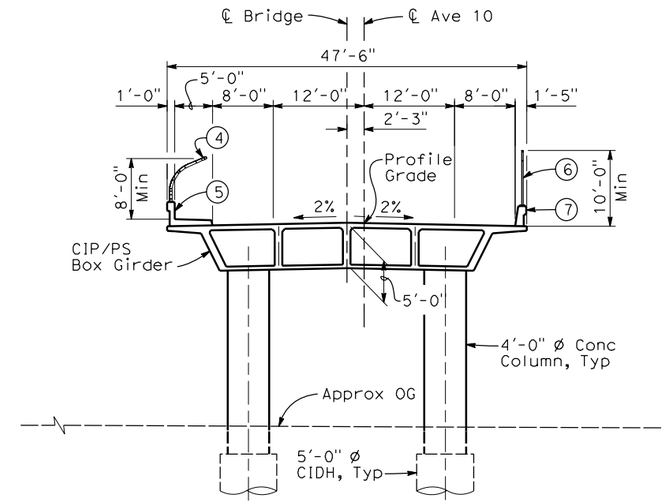
ELEVATION

1" = 30'-0"



PLAN

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 10 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 10 to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	238'-2"
WIDTH	=	47'-6"
AREA	=	11,312 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 2

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

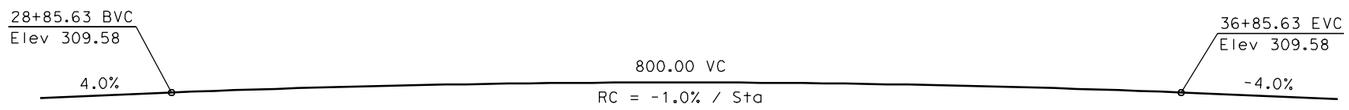
AECOM Technical Services, Inc.
2020 L Street, Suite 300 Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 24
AVENUE 10 OVERHEAD
PLANNING STUDY

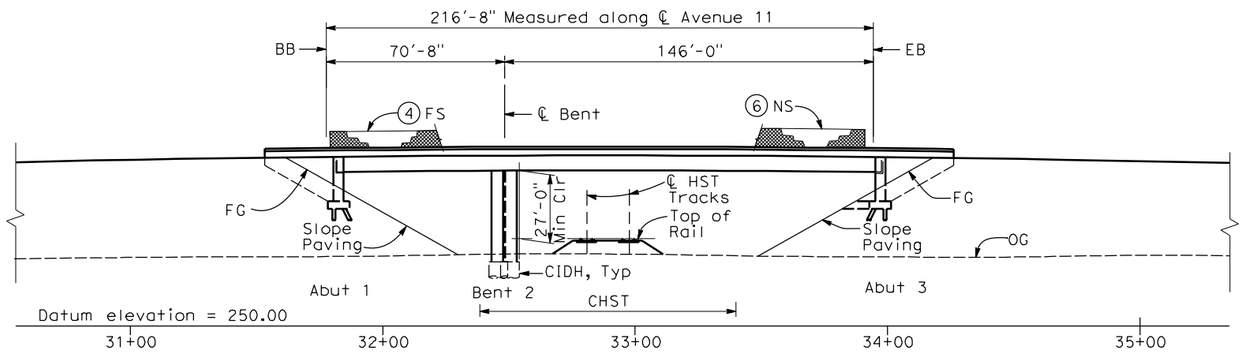
CONTRACT NO. HSR06-007
DRAWING NO. ST1002
SCALE As shown
SHEET NO. OF

\\usscrlfp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\15%_Grade Structures_Revisions\W-ML-ST-OH_Ave 10.dgn 3:54:47 PM 3/30/2012 cisneros



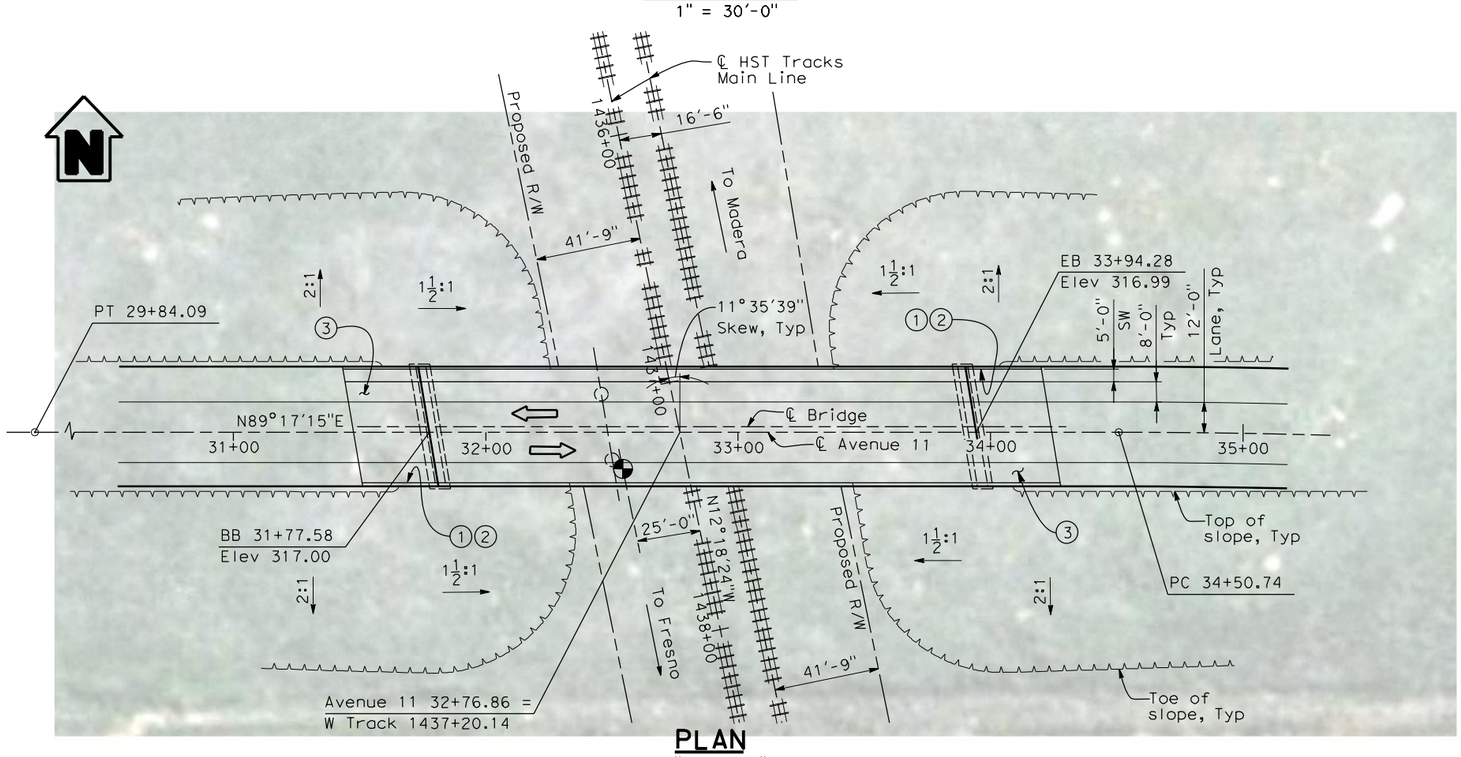
PROFILE GRADE

NTS



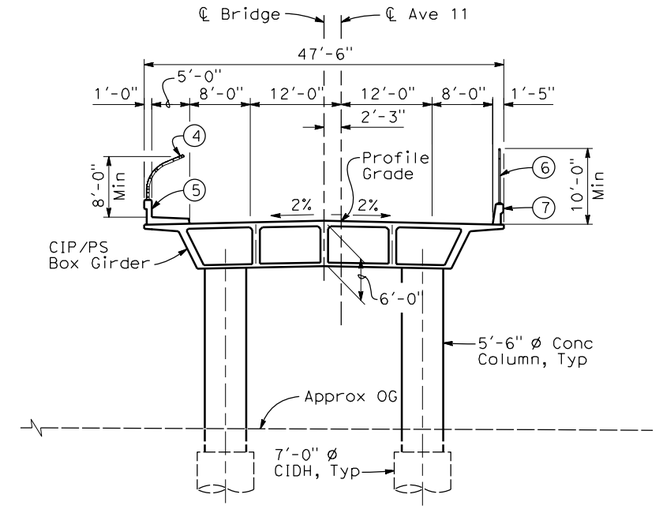
ELEVATION

1" = 30'-0"



PLAN

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 11 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 11 to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	216'-8"
WIDTH	=	47'-6"
AREA	=	10,294 ft²
COST/ ▢FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 3

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

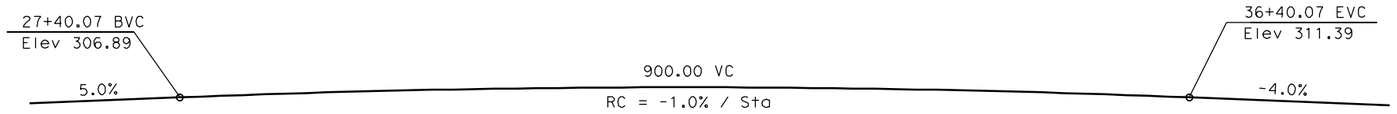
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

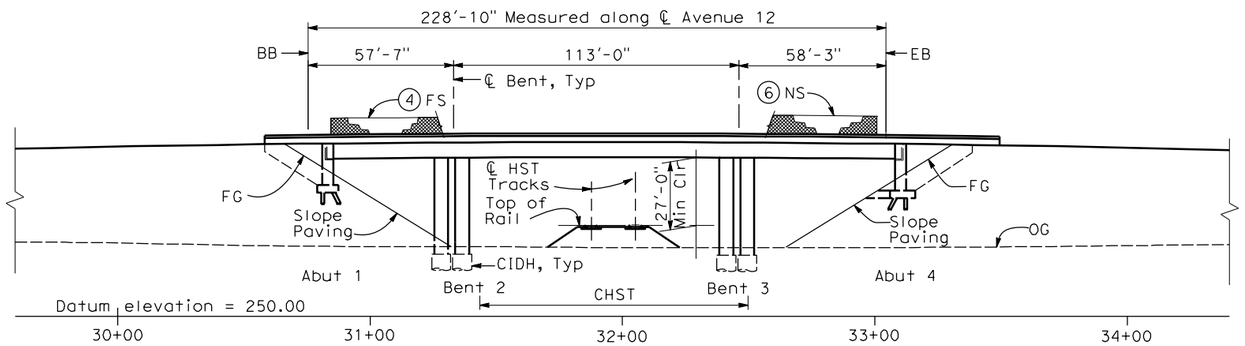
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 24
AVENUE 11 OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1003
SCALE As shown
SHEET NO. OF

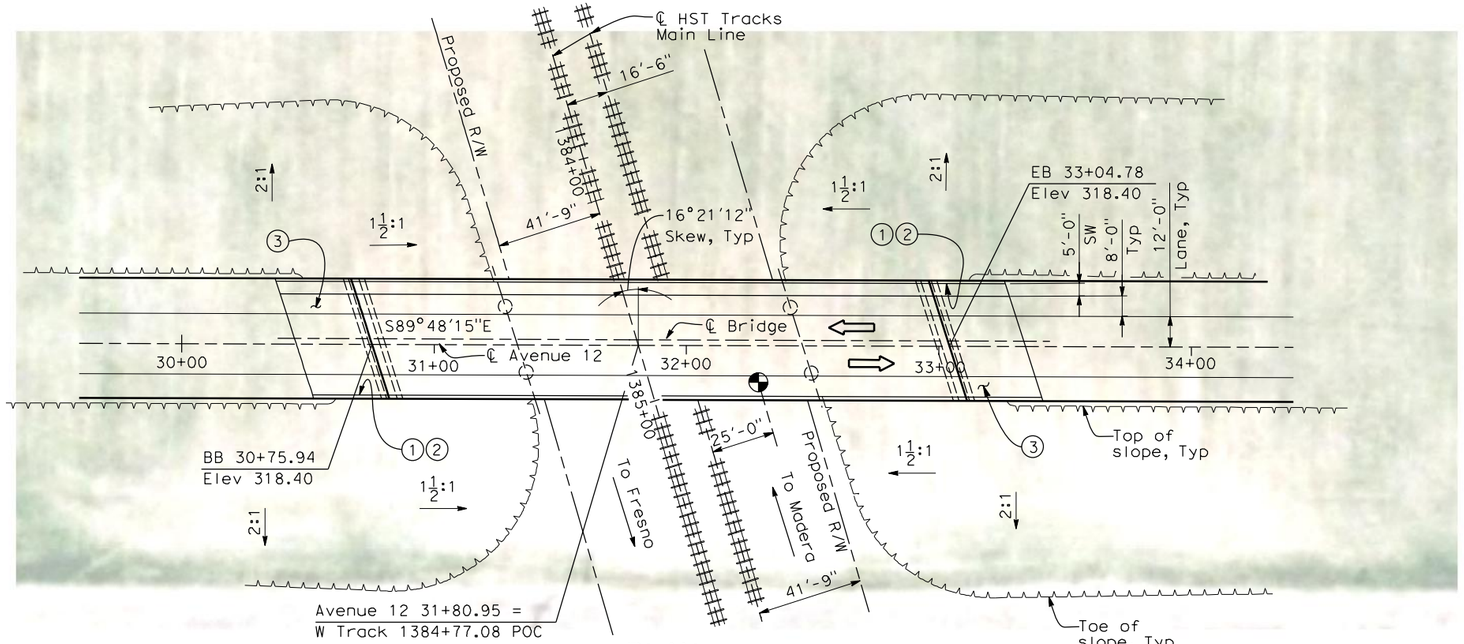
3/30/2012 3:56:43 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\15%_Grade Structures_Revisions\W-ML-ST-OH_Ave 11.dgn
cisnerose



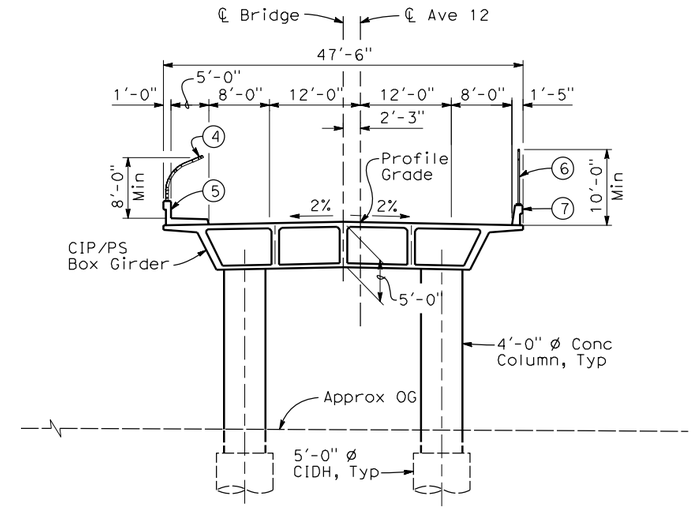
PROFILE GRADE
NTS



ELEVATION
1" = 30'-0"



PLAN
1" = 30'-0"



TYPICAL SECTION
1" = 10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 12 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 12 to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	228'-10"
WIDTH	=	47'-6"
AREA	=	10,870 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 4

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

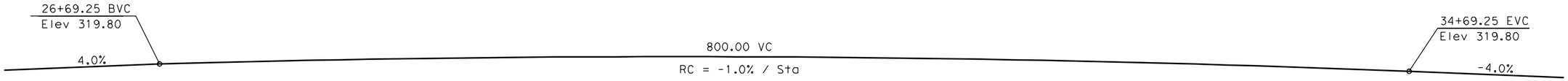
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 24
AVENUE 12 OVERHEAD
PLANNING STUDY

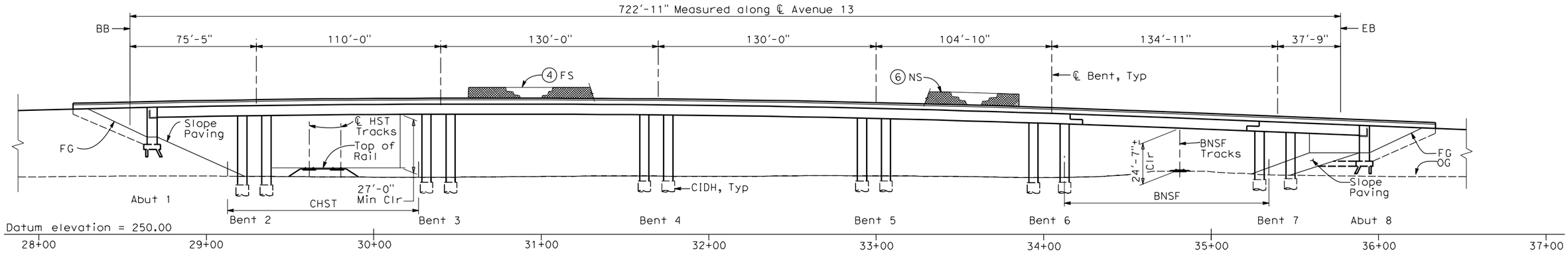
CONTRACT NO. HSR06-007
DRAWING NO. ST1004
SCALE As shown
SHEET NO. OF

cisnerose 3/30/2012 3:57:57 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\15%_Grade Structures_Revisions\W-ML-ST-OH_Ave 12.dgn



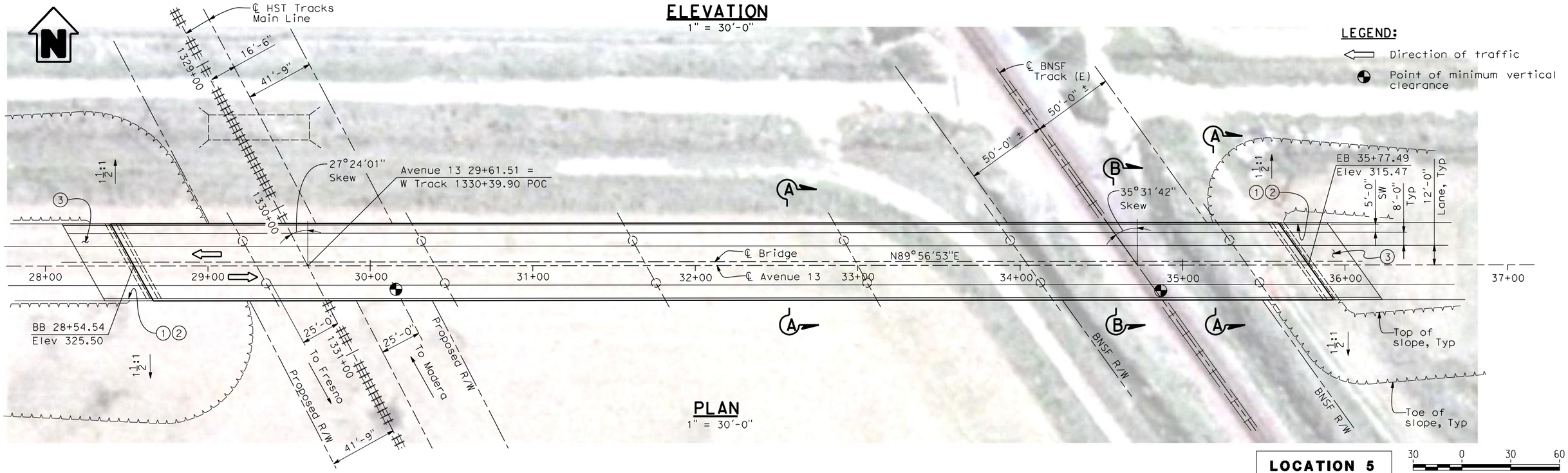
PROFILE GRADE

NTS



ELEVATION

1" = 30'-0"



PLAN

1" = 30'-0"

LOCATION 5

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

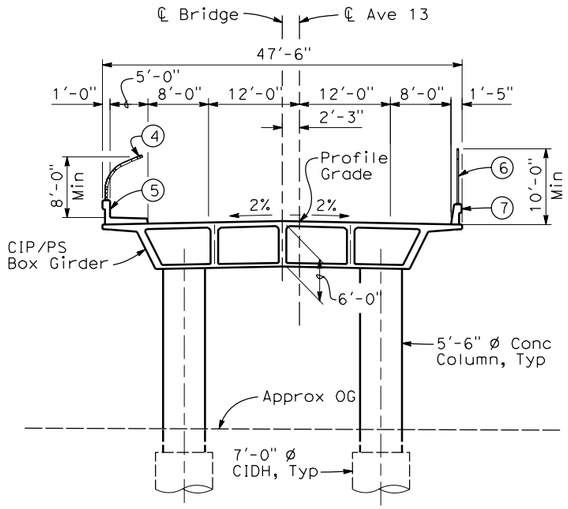
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 24
AVENUE 13 OVERHEAD
PLANNING STUDY - SHEET 1 OF 2

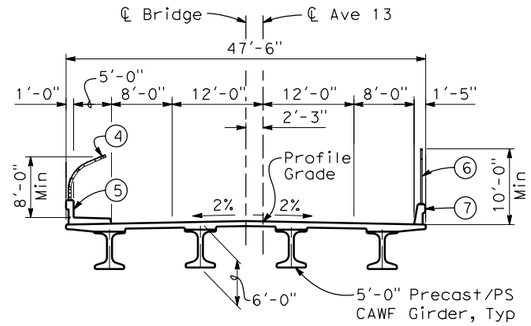
CONTRACT NO. HSR06-007
DRAWING NO. ST1005
SCALE As shown
SHEET NO. OF

cisnerose 3/30/2012 3:59:26 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\15%_Grade Structures_Revisions\W-ML-ST-OH_Ave 13.dgn



SECTION A-A

1"=10'-0"



SECTION B-B

1"=10'-0"

DATE OF ESTIMATE	
BRIDGE REMOVAL =	
STRUCTURE DEPTH =	6'-0"
LENGTH =	722'-11"
WIDTH =	47'-6"
AREA =	34,340 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY =	
TOTAL COST =	

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 13 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 13 to be determined.
9. Existing underground and overhead utilities to be determined.

LOCATION 5

10 0 10 20
1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

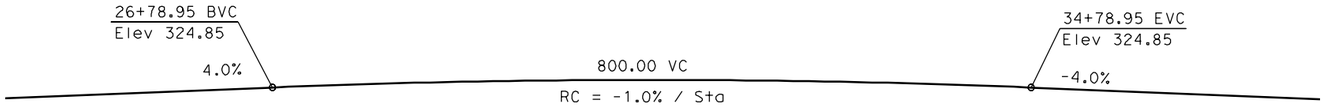
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 24
AVENUE 13 OVERHEAD
PLANNING STUDY - SHEET 2 OF 2

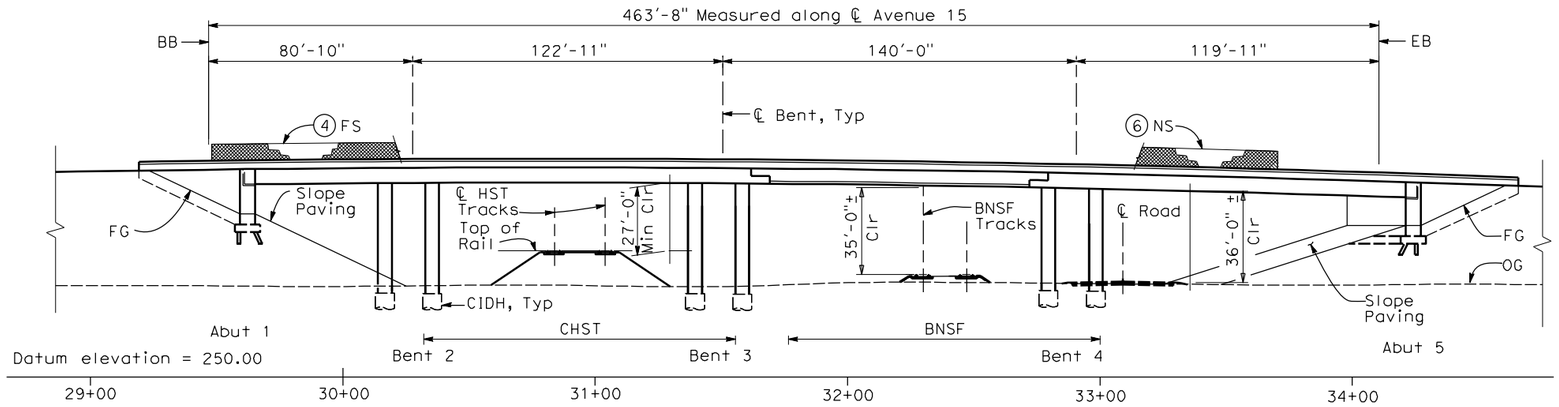
CONTRACT NO. HSR06-007
DRAWING NO. ST1005A
SCALE As shown
SHEET NO. OF

3/30/2012 4:00:59 PM \\uscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\15%_Grade Structures_Revisions\W-ML-ST-OH_Ave 13a.dgn
cisnerose

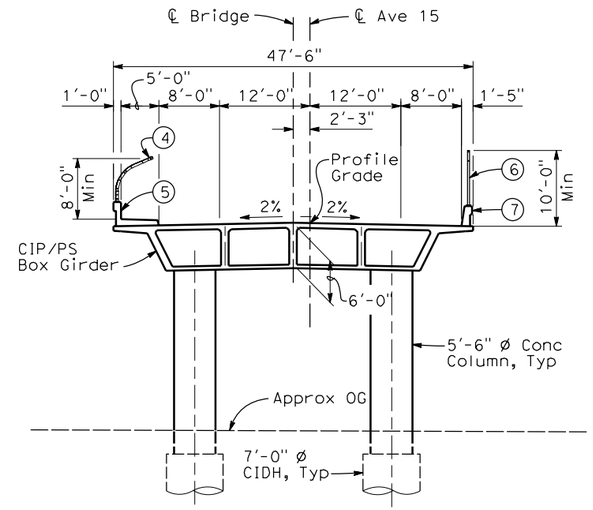


PROFILE GRADE
NTS

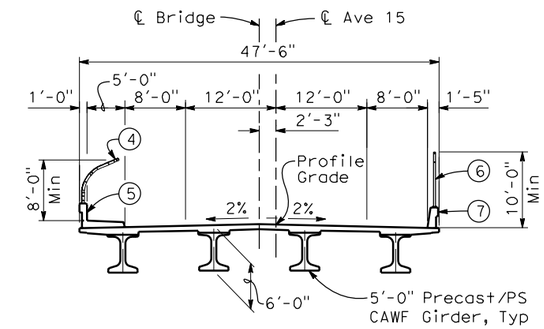
DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	463'-8"
WIDTH	=	47'-6"
AREA	=	22,026 ft^2
COST/ ☐FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	



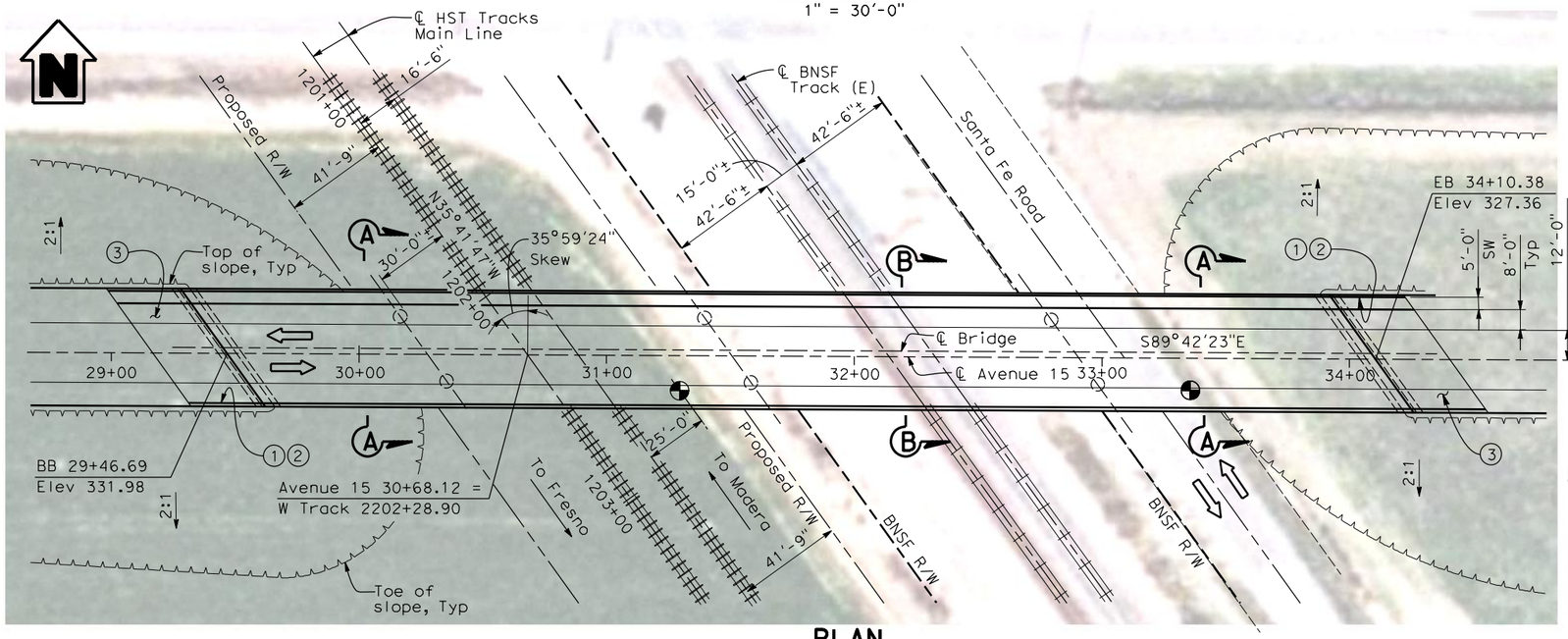
ELEVATION
1" = 30'-0"



SECTION A-A
1"=10'-0"



SECTION B-B
1"=10'-0"



PLAN
1" = 30'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 15 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 15 to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

Pt = Petroleum

UG = Underground

LOCATION 6

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

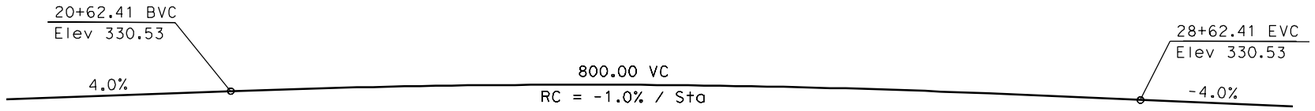
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 24
AVENUE 15 OVERHEAD
PLANNING STUDY

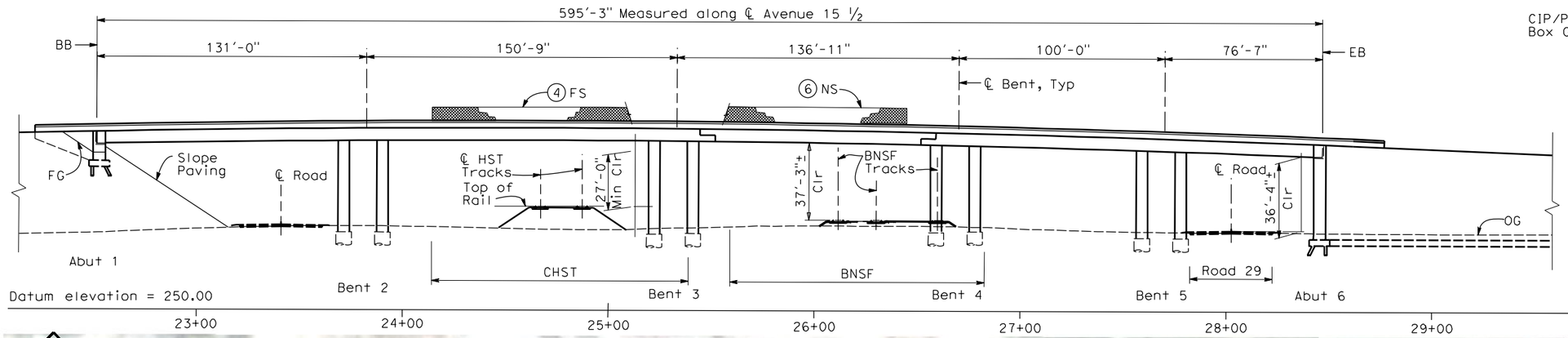
CONTRACT NO. HSR06-007
DRAWING NO. ST1006
SCALE As shown
SHEET NO. OF

3/30/2012 4:08:15 PM \\usscrlfp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\W-MF-ST-OH_Ave 15H.dgn
cisnerose

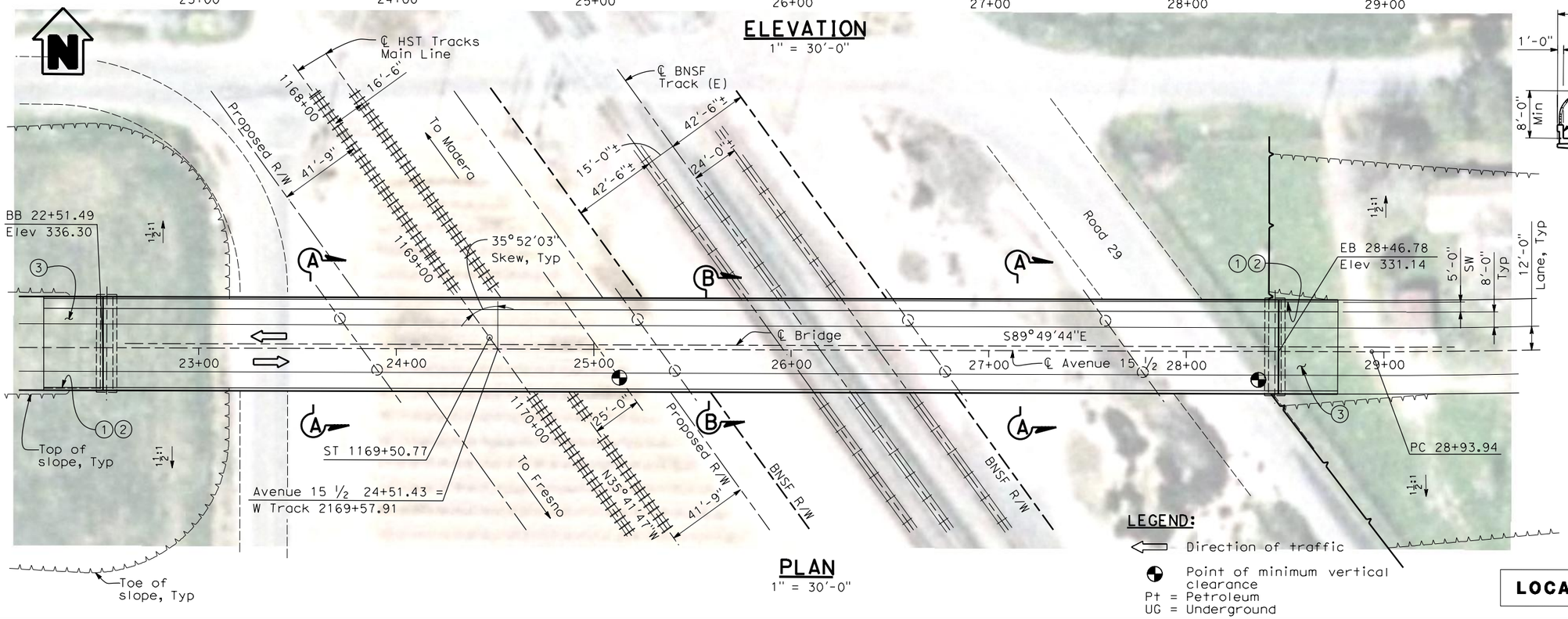


PROFILE GRADE
NTS

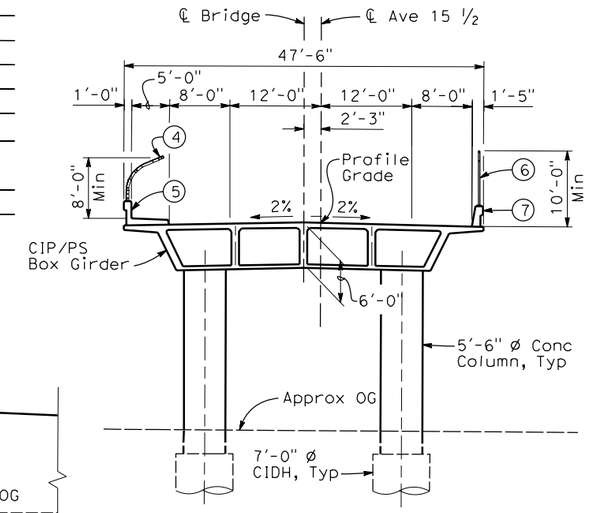
DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	595'-3"
WIDTH	=	47'-6"
AREA	=	28,280 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	



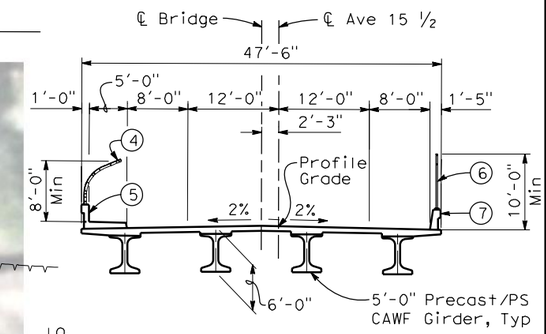
ELEVATION
1" = 30'-0"



PLAN
1" = 30'-0"



SECTION A-A
1"=10'-0"



SECTION B-B
1"=10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 15 ½ OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 15 ½ to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

⊕ Point of minimum vertical clearance

Pt = Petroleum

UG = Underground

LOCATION 7

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

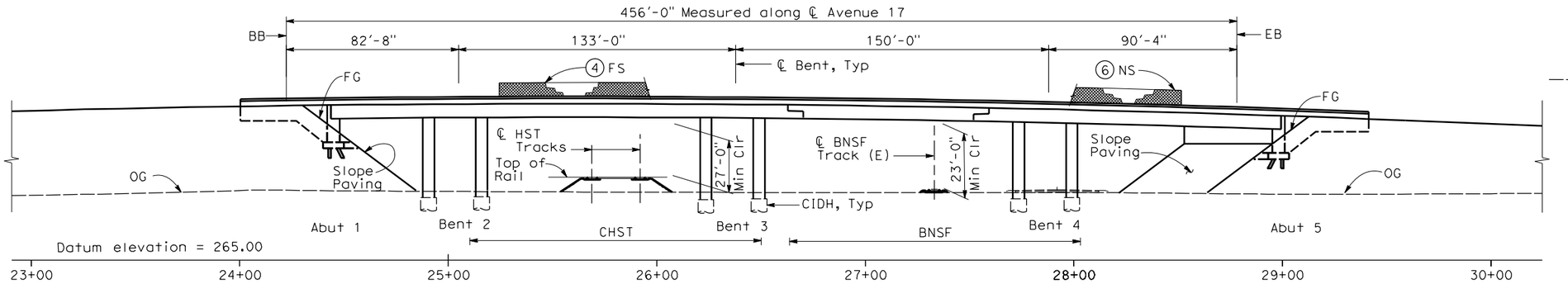
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 24
AVENUE 15½ OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1007
SCALE As shown
SHEET NO. OF

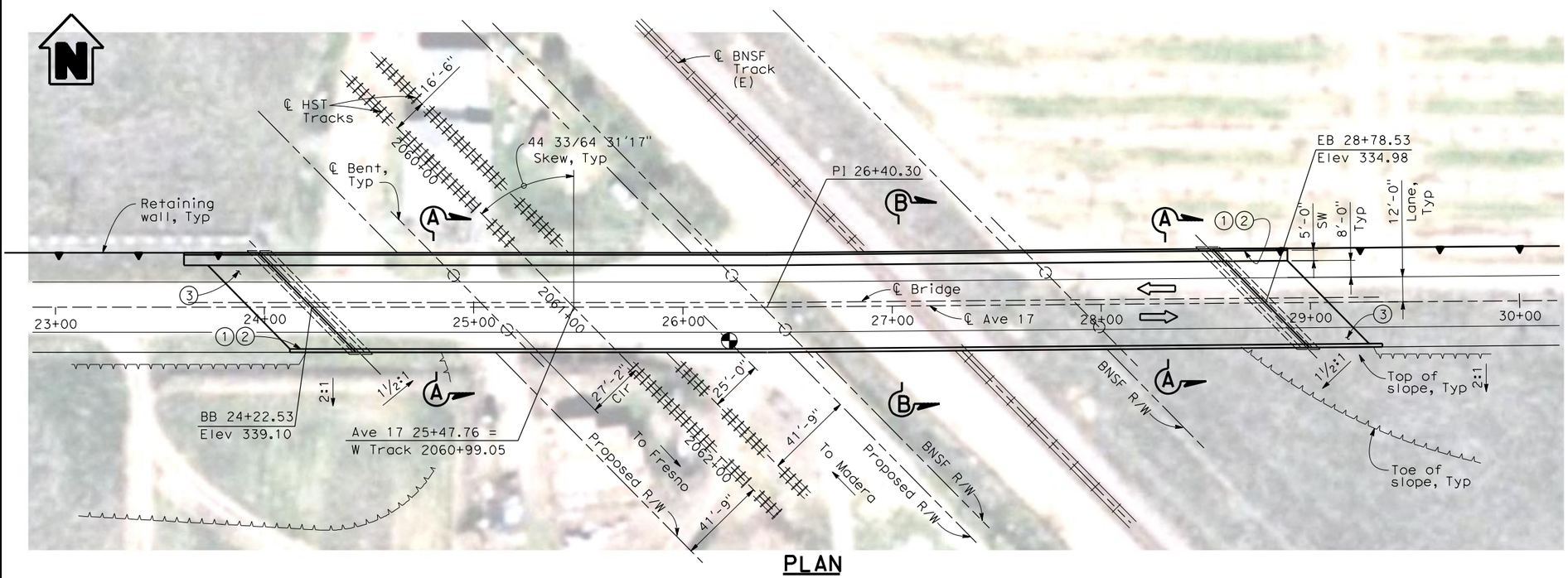
3/30/2012 4:05:41 PM \\usscrlfp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\W-MF-ST-OH_Ave 15.5H.dgn
cisnerose

PROFILE GRADE
NTS

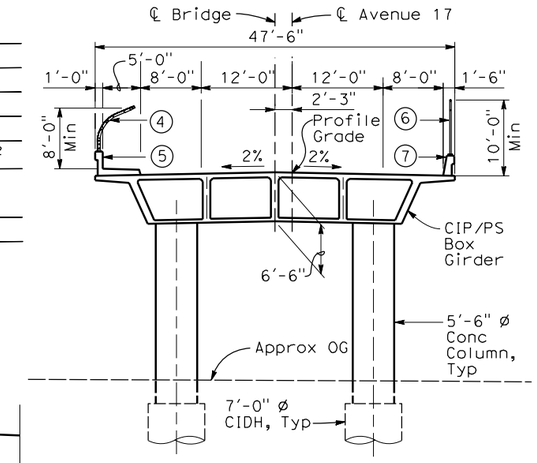
DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-6"
LENGTH	=	456'-0"
WIDTH	=	47'-6"
AREA	=	21,660 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	



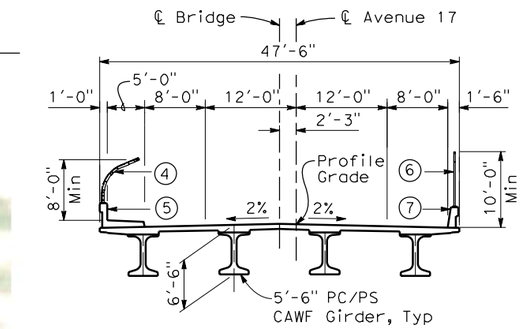
ELEVATION
1" = 30'-0"



PLAN
1" = 30'-0"



SECTION A-A
1"=10'-0"



SECTION B-B
1"=10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 17 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 17 and BNSF track to be determined.
9. Existing underground and overhead utilities to be determined.

30 0 30 60
1"=30'

LOCATION 9

REV	DATE	BY	CHK	APP	DESCRIPTION
1	04/11/12	HL	EC	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY L. LEUNG
IN CHARGE A. BOONE
DATE 04/11/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

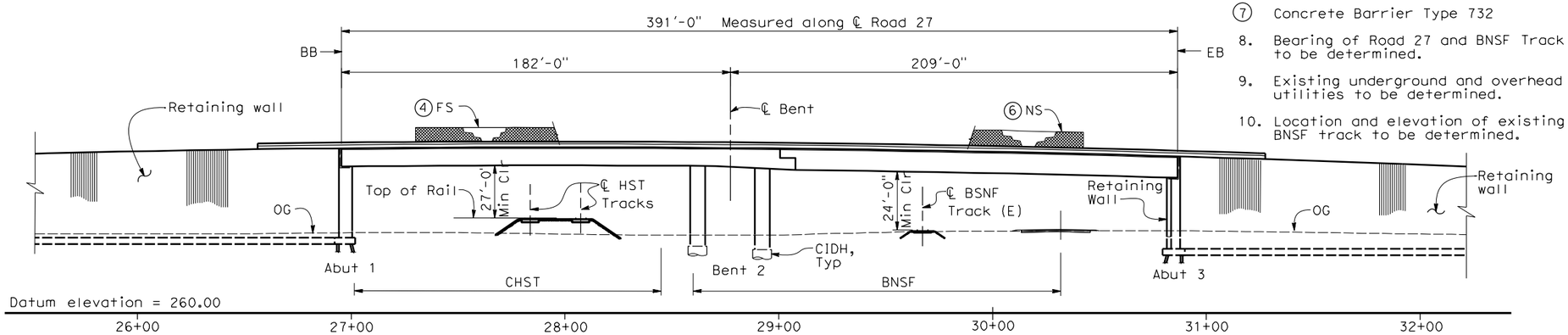
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
AVENUE 17 OVERHEAD
PLANNING SYUDY

CONTRACT NO.
DRAWING NO. ST1009
SCALE As shown
SHEET NO. OF

cisnerose 4/2/2012 10:42:39 AM \\usscrlfp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\cadd\Struct\Sheet\15%_Grade Structures_Revisions\W-MF-ST1009.dgn

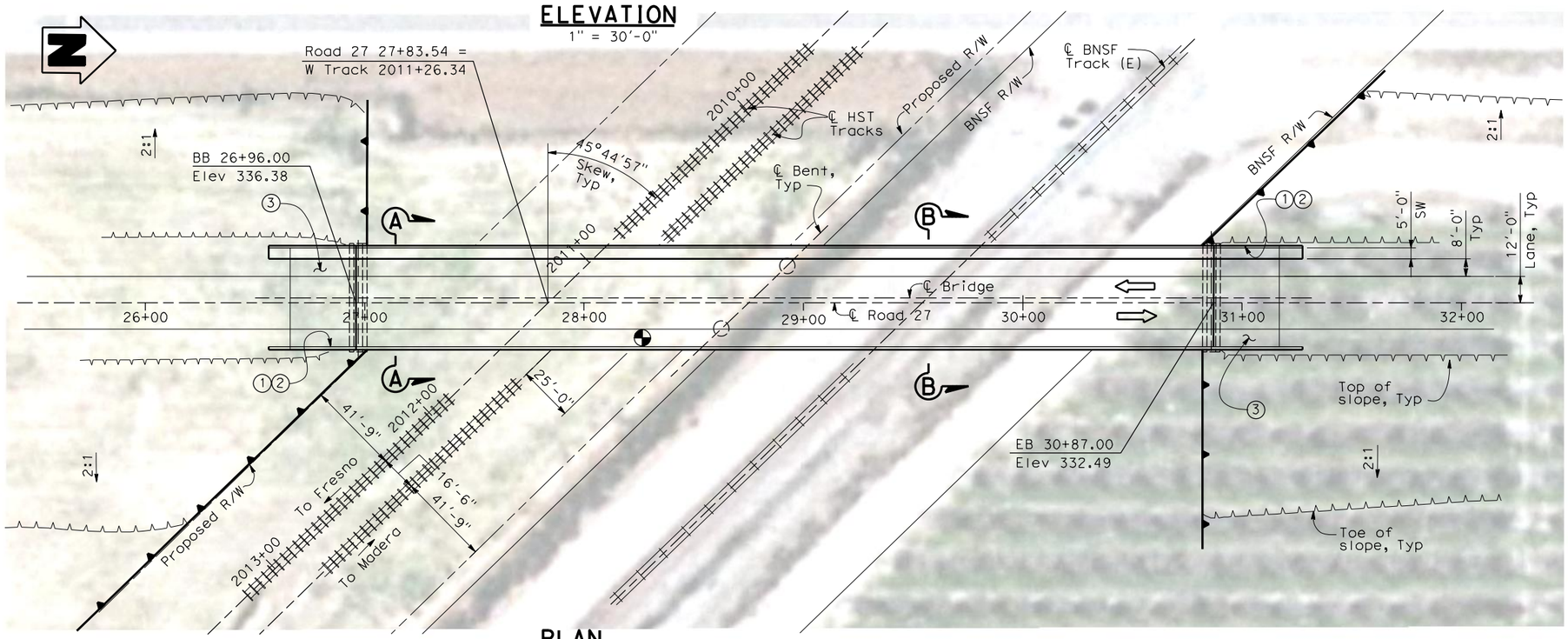
PROFILE GRADE

NTS



ELEVATION

1" = 30'-0"

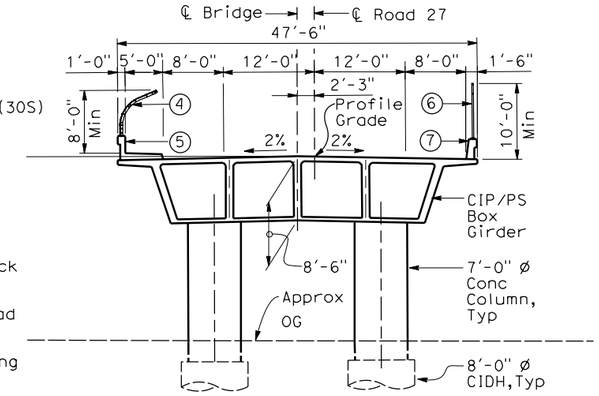


PLAN

1" = 30'-0"

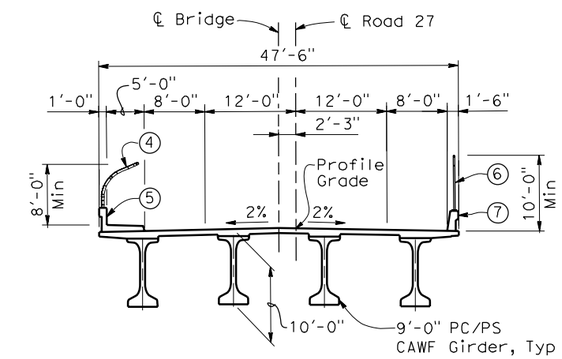
NOTES:

1. Paint "Bridge No. xx-xx"
2. Paint "Road 27 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Road 27 and BNSF Track to be determined.
9. Existing underground and overhead utilities to be determined.
10. Location and elevation of existing BNSF track to be determined.



SECTION A-A

1" = 10'-0"



SECTION B-B

1" = 10'-0"

LEGEND:

- Direction of traffic
- Point of minimum vertical clearance
- Retaining wall

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	8'-6" - 10'-0"
LENGTH	=	391'-0"
WIDTH	=	47'-6"
AREA	=	18,570 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 10

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY J. TANG
CHECKED BY L. LEUNG
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

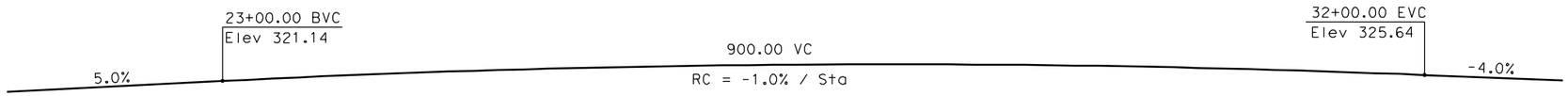
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 24
ROAD 27 OVERHEAD
PLANNING STUDY

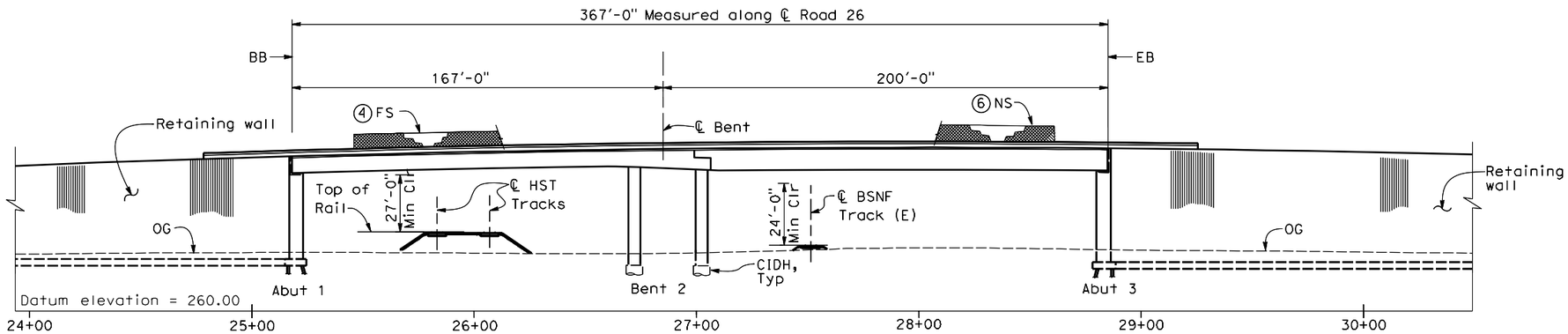
CONTRACT NO. HSR06-007
DRAWING NO. ST1010
SCALE As shown
SHEET NO. OF

3/30/2012 4:18:08 PM \\usscrlfp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separation\W-MF-ST-1010-H.dgn
cisnerose



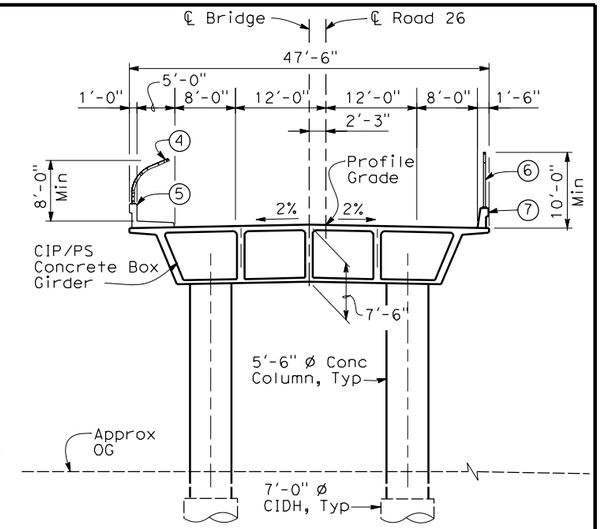
PROFILE GRADE

NTS



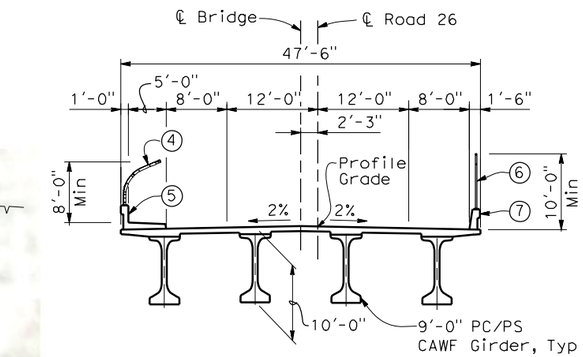
ELEVATION

1" = 30'-0"



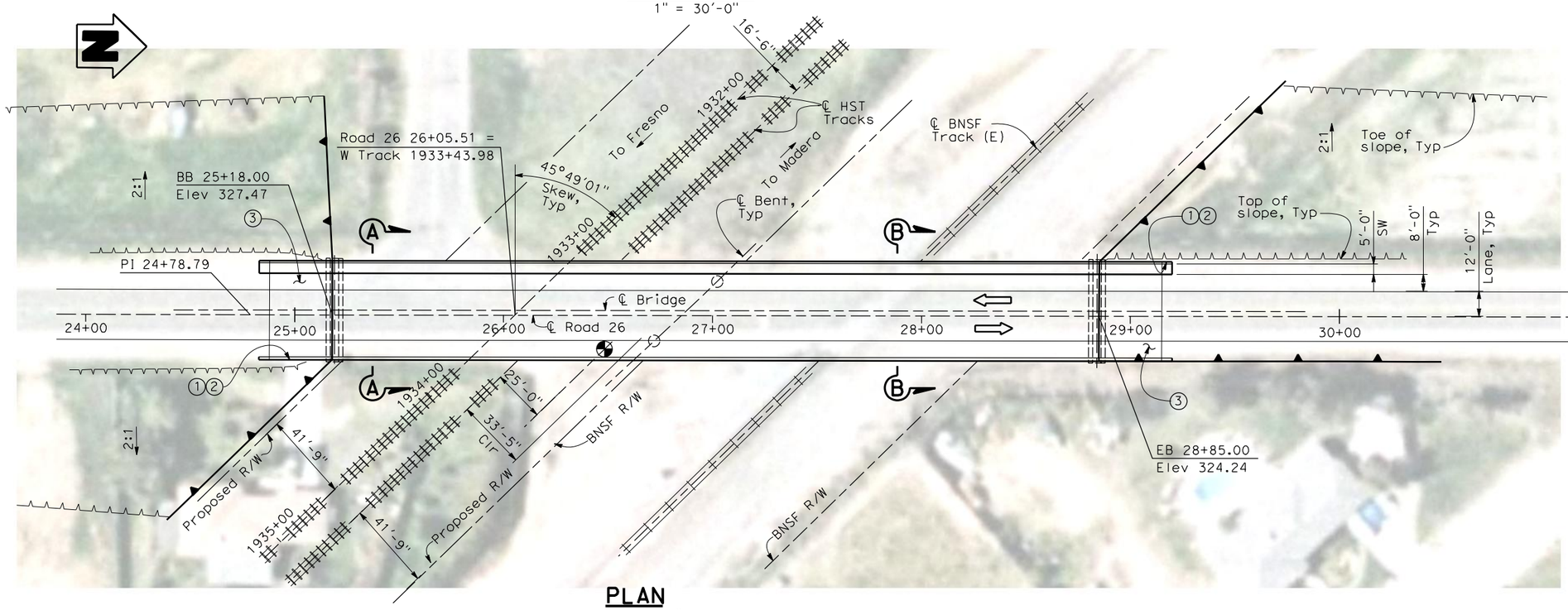
SECTION A-A

1" = 10'-0"



SECTION B-B

1" = 10'-0"



PLAN

1" = 30'-0"

LEGEND:

- Direction of traffic
- Point of minimum vertical clearance
- Retaining wall

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	7'-6" - 10'-0"
LENGTH	=	367'-0"
WIDTH	=	47'-6"
AREA	=	17,430 ft^2
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 11

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	04/11/12	HL	JR	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 04/11/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

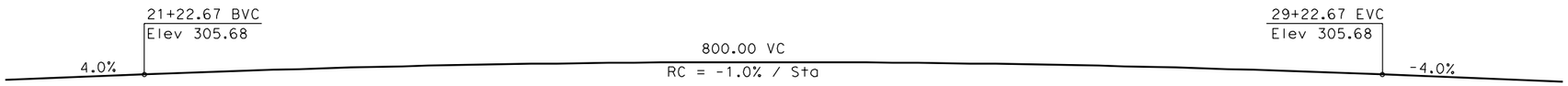
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 21
ROAD 26 OVERHEAD
PLANNING STUDY

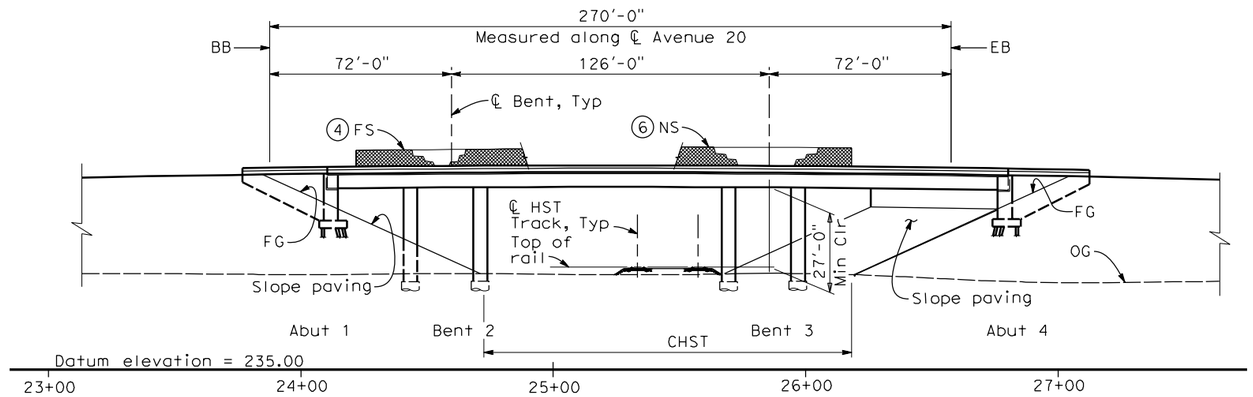
CONTRACT NO. HSR06-007
DRAWING NO. ST1011
SCALE As shown
SHEET NO. OF

cisneros 3/30/2012 4:23:22 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\W-MF-ST1011.dgn



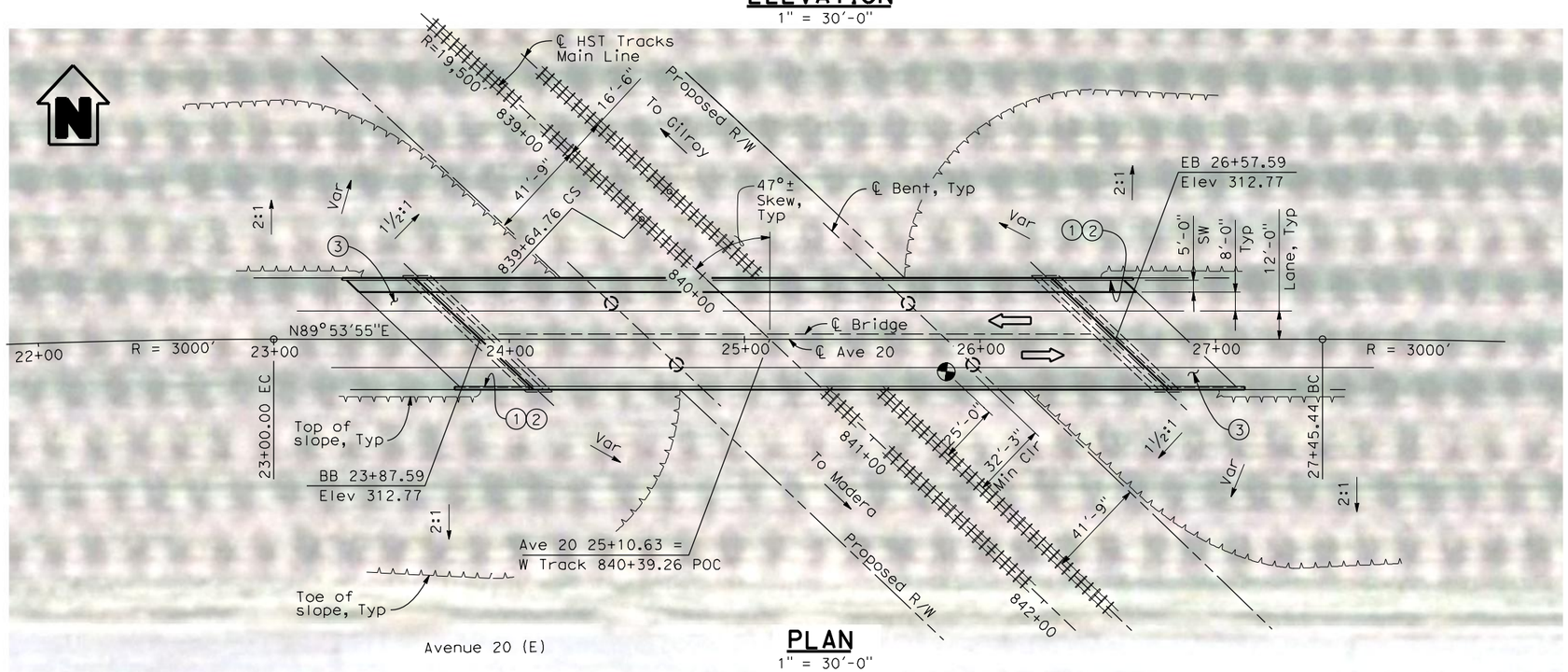
PROFILE GRADE

NTS



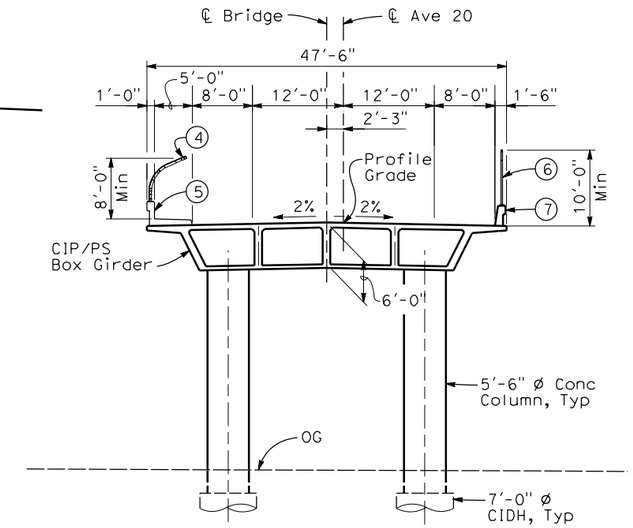
ELEVATION

1" = 30'-0"



PLAN

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 20 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◕ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	270'-0"
WIDTH	=	47'-6"
AREA	=	12,850 ft^2
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 90

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY K. LEE
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

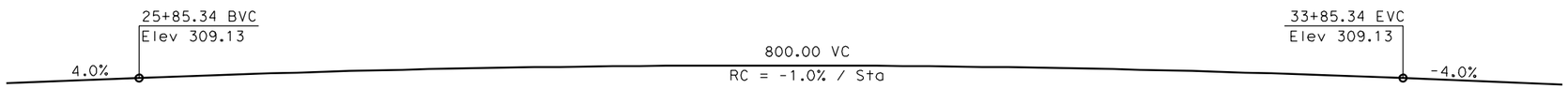
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

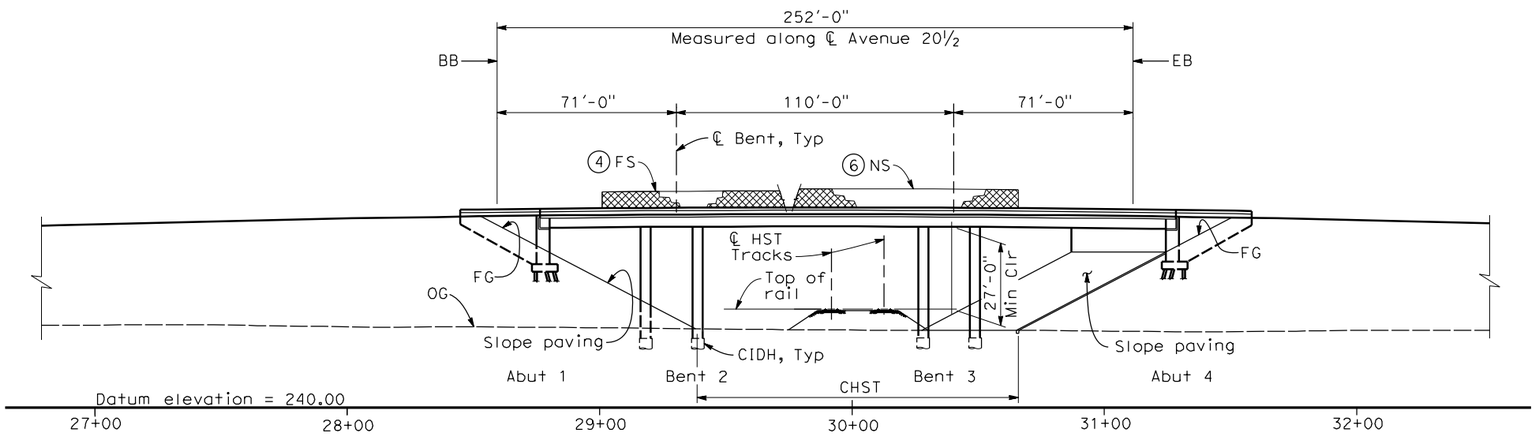
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID MAIN LINE
AVENUE 21
AVENUE 20 OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1090
SCALE As shown
SHEET NO. OF

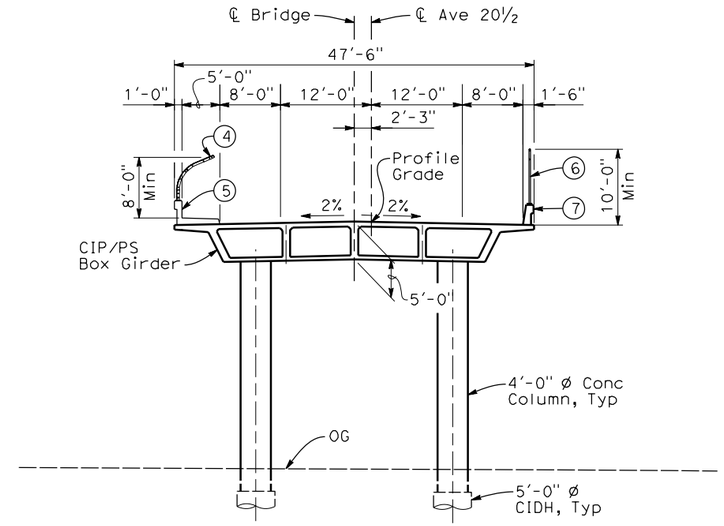
3/30/2012 4:26:33 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separation\W-MF-ST-OH_Ave 20H-Loc 90.dgn
cisnerose



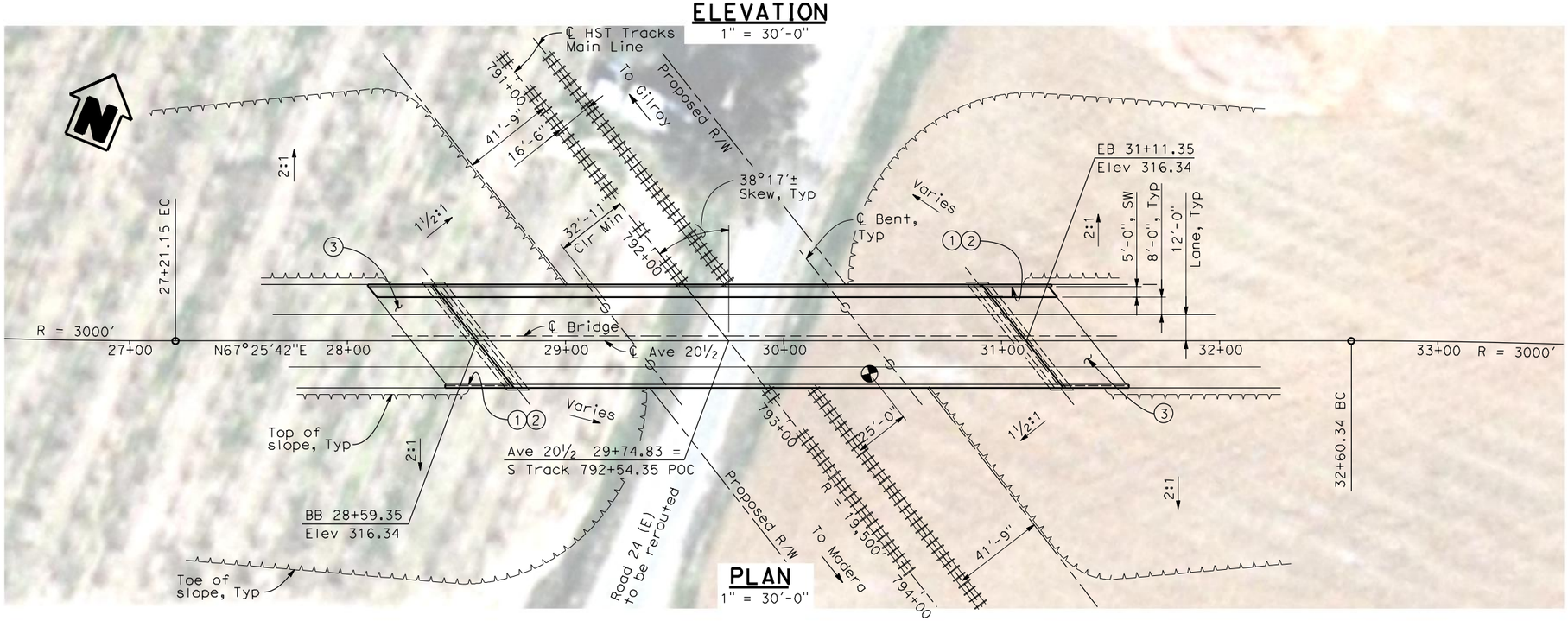
PROFILE GRADE
NTS



ELEVATION
1" = 30'-0"



TYPICAL SECTION
1" = 10'-0"



PLAN
1" = 30'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 20½ OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND/ABBREVIATIONS:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	252'-0"
WIDTH	=	47'-6"
AREA	=	12,000 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 91

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY K. LEE
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

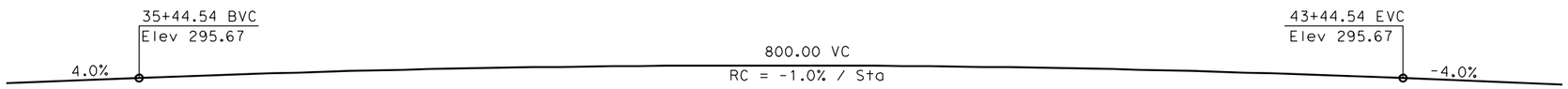
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID MAIN LINE
AVENUE 21
AVENUE 20½ OVERHEAD
PLANNING STUDY

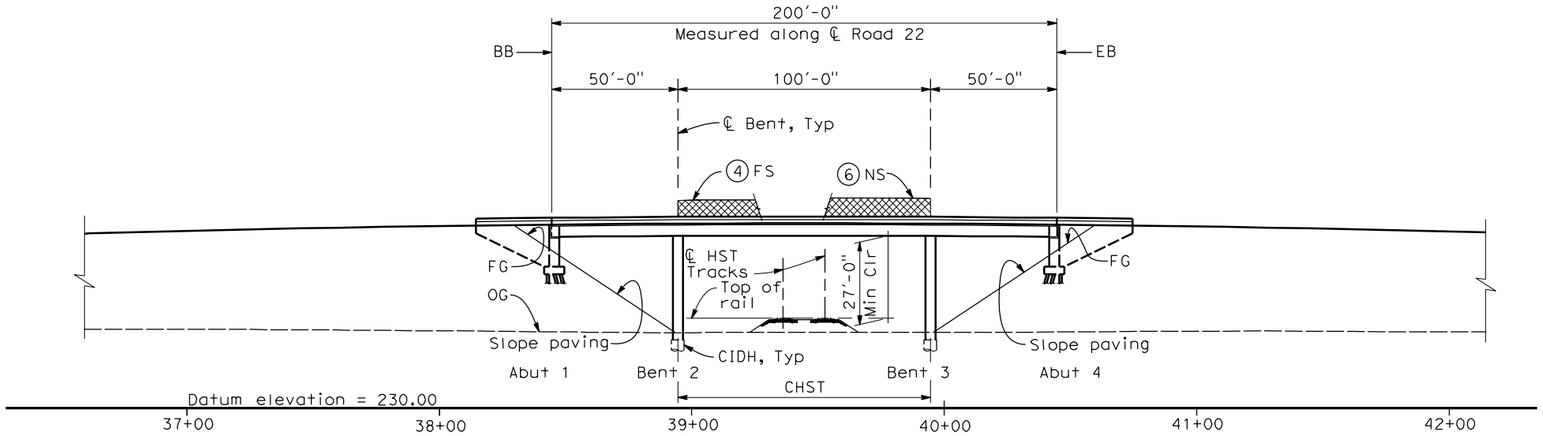
CONTRACT NO. HSR06-007
DRAWING NO. ST1091
SCALE As shown
SHEET NO. OF

\\usscrifp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\W-MF-ST-OH_Ave 20.5H-Loc 91.dgn
3/30/2012 4:27:56 PM
cisnerose



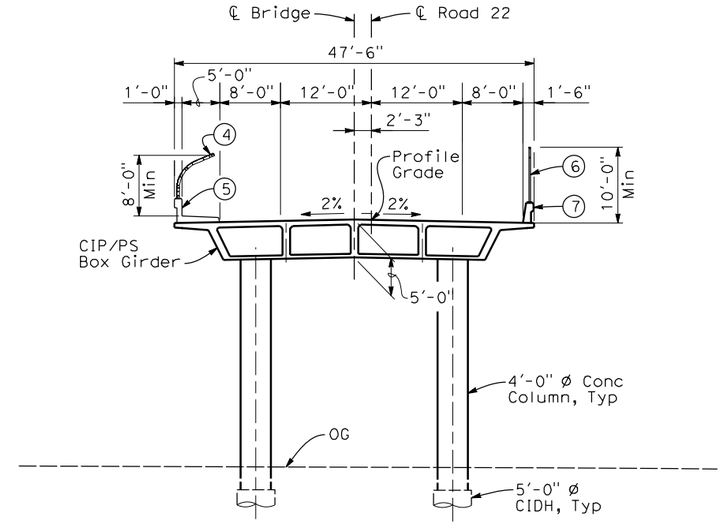
PROFILE GRADE

NTS



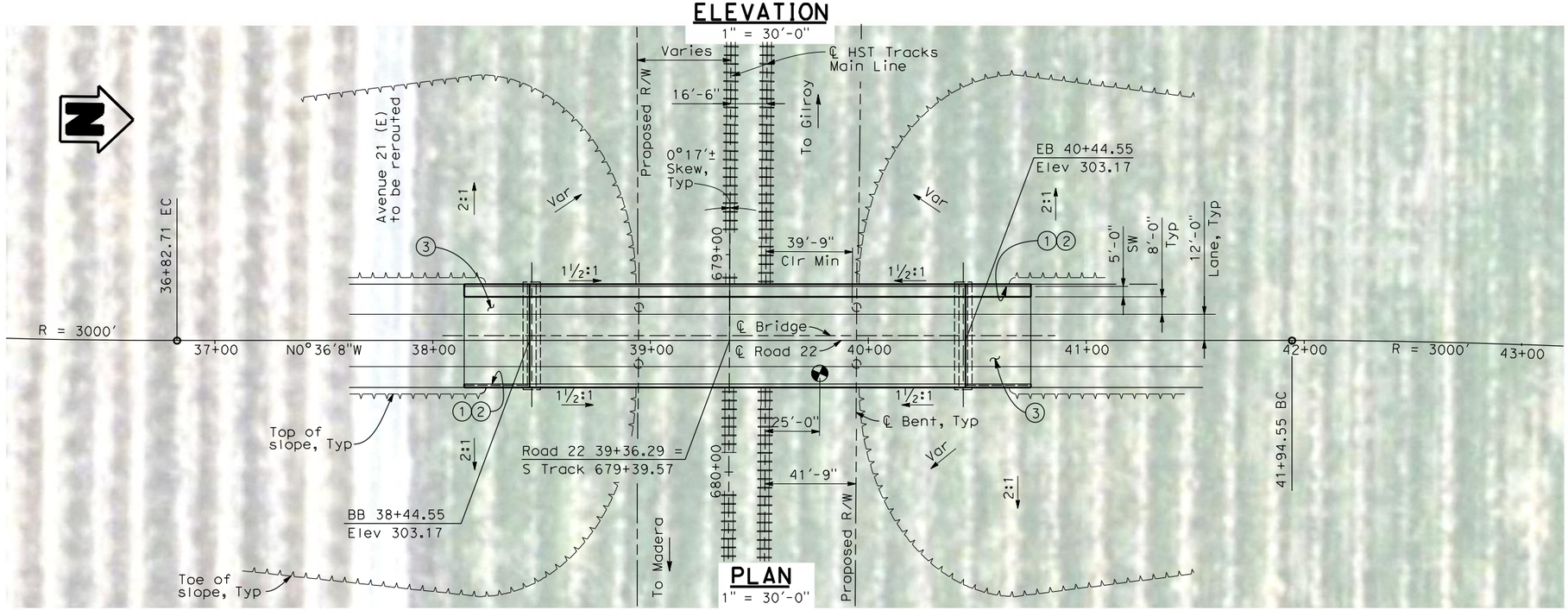
ELEVATION

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"



PLAN

1" = 30'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Road 22 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND/ABBREVIATIONS:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	200'-0"
WIDTH	=	47'-6"
AREA	=	9500 ft^2
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 92

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY K. LEE
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

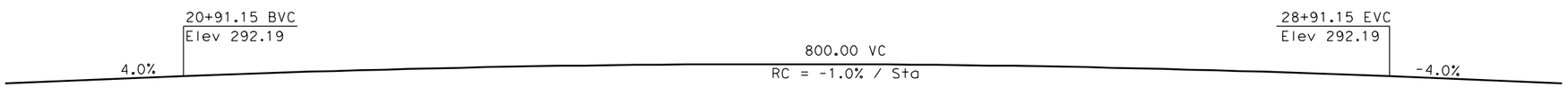
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

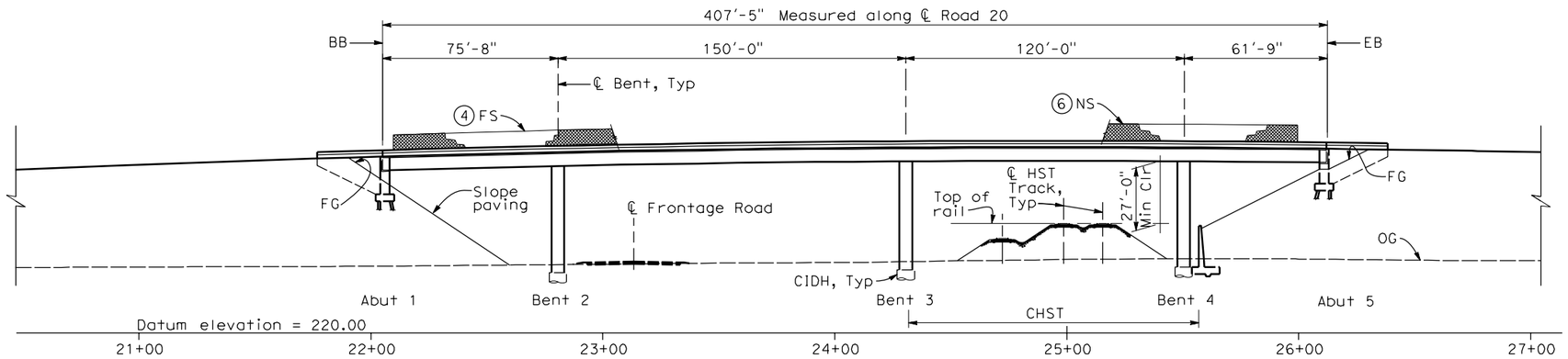
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID MAIN LINE
AVENUE 21
ROAD 22 OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1092
SCALE As shown
SHEET NO. OF

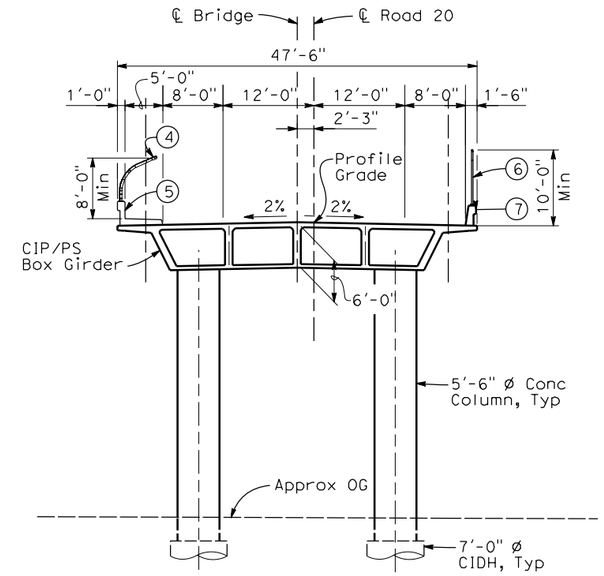
3/30/2012 4:30:18 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separation\W-MF-ST-OH_Road 22H-Loc 92.dgn
cisnerose



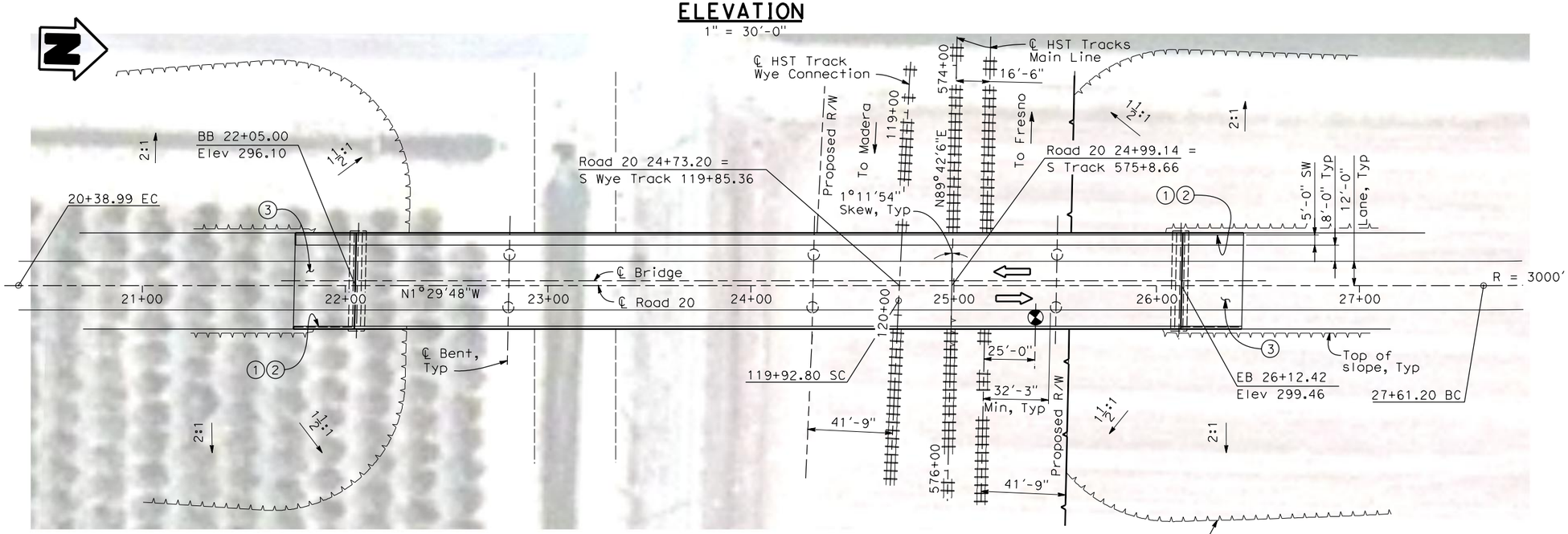
PROFILE GRADE
NTS



ELEVATION
1" = 30'-0"



TYPICAL SECTION
1" = 10'-0"



PLAN
1" = 30'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Road 20 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND:

- Direction of traffic
- Point of minimum vertical clearance
- Retaining Wall

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	407'-5"
WIDTH	=	47'-6"
AREA	=	19,350 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTENGENCY	=	
TOTAL COST	=	

LOCATION 25

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY K. LEE
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

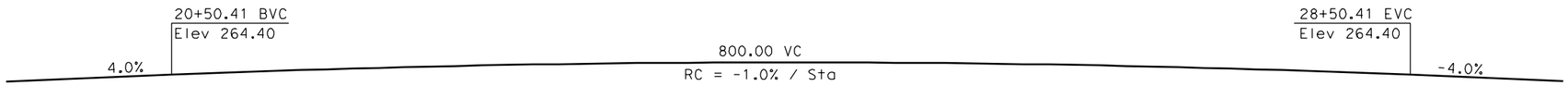
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

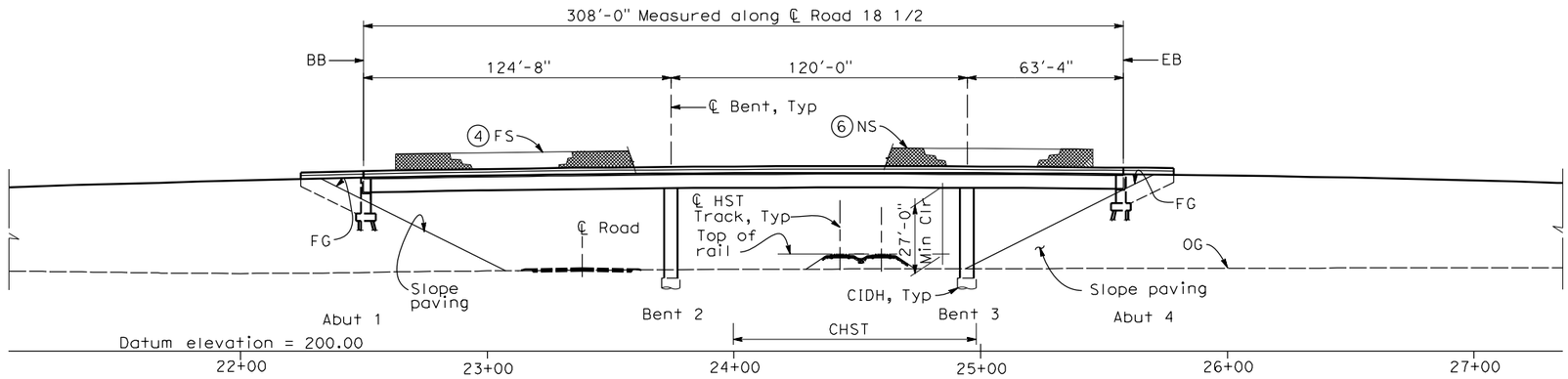
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 21
ROAD 20 OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1026
SCALE As shown
SHEET NO. OF

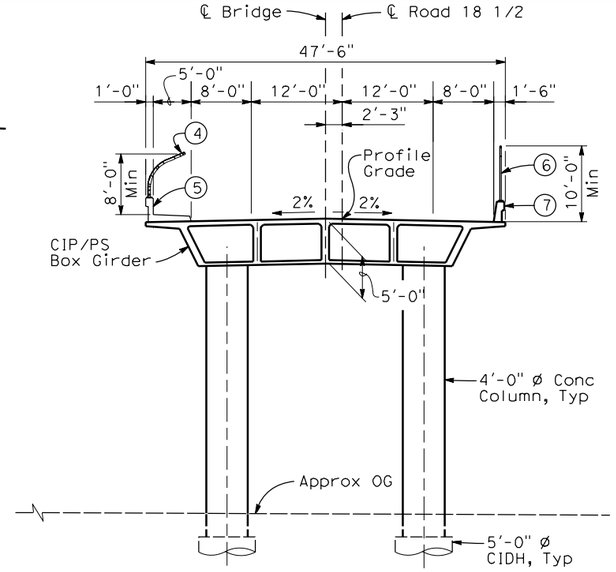
cisnerose 3/30/2012 4:31:20 PM \\uscr1fp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\W-MF-ST-OH_Rd 20-Loc 25.dgn



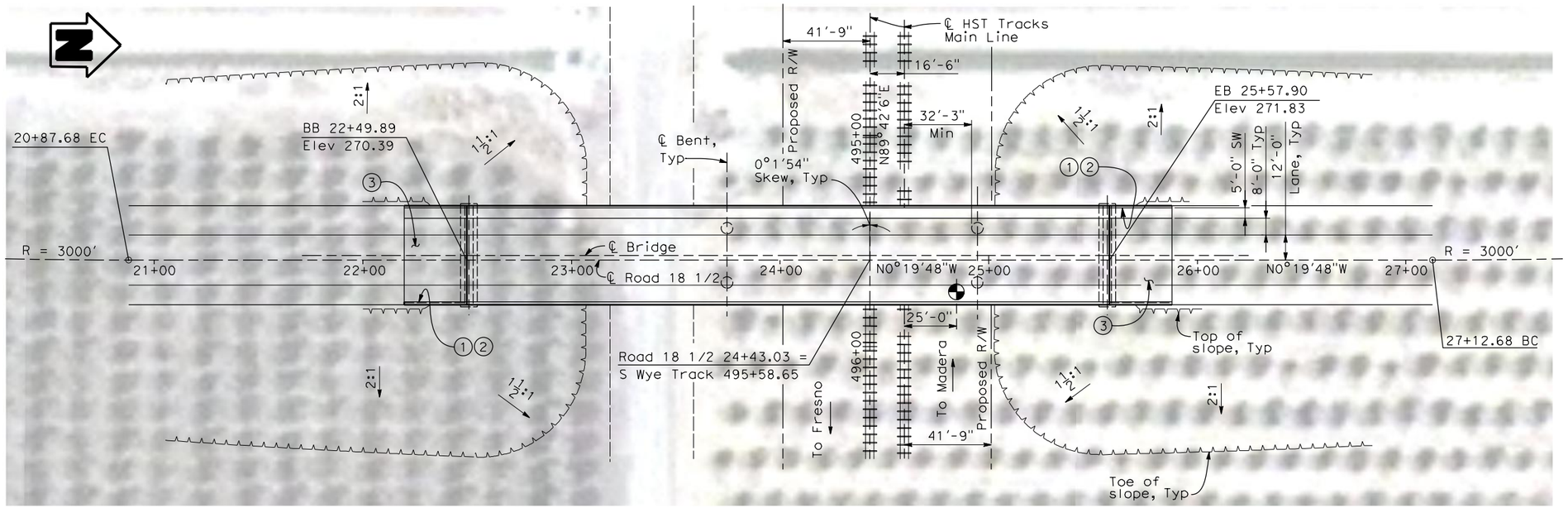
PROFILE GRADE
NTS



ELEVATION
1" = 30'-0"



TYPICAL SECTION
1" = 10'-0"



PLAN
1" = 30'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Road 18 1/2 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND:

Direction of traffic

Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	308'-0"
WIDTH	=	47'-6"
AREA	=	14,630 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 26

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY K. LEE
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

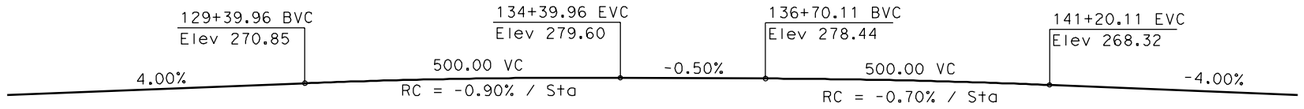
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 21
ROAD 18½ OVERHEAD
PLANNING STUDY

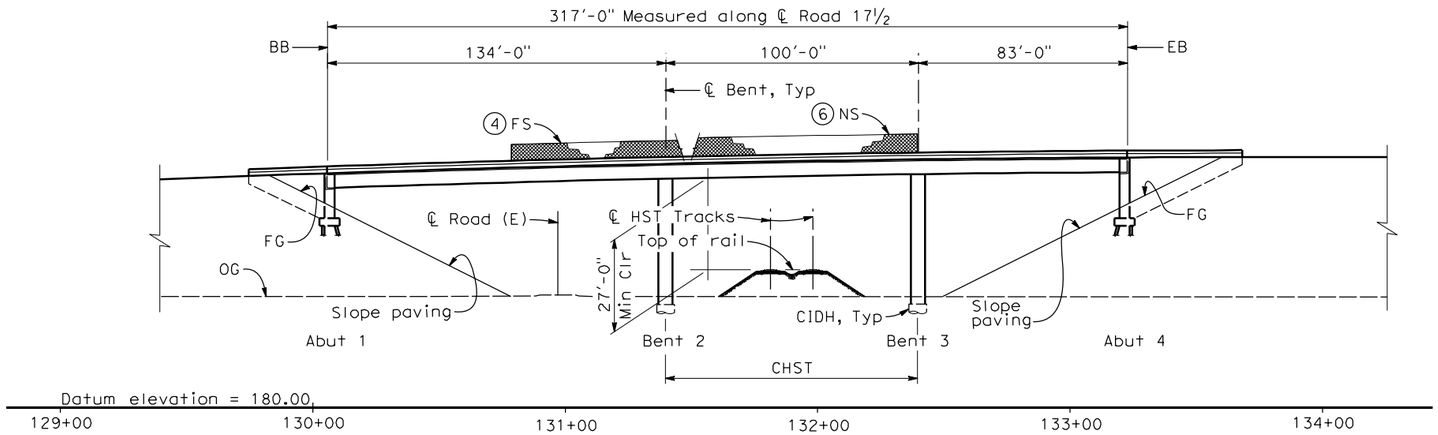
CONTRACT NO. HSR06-007
DRAWING NO. ST1027
SCALE As shown
SHEET NO. OF

cisnerose 3/30/2012 4:32:06 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\W-MF-ST-OH_Rd 18.5-Loc 26.dgn



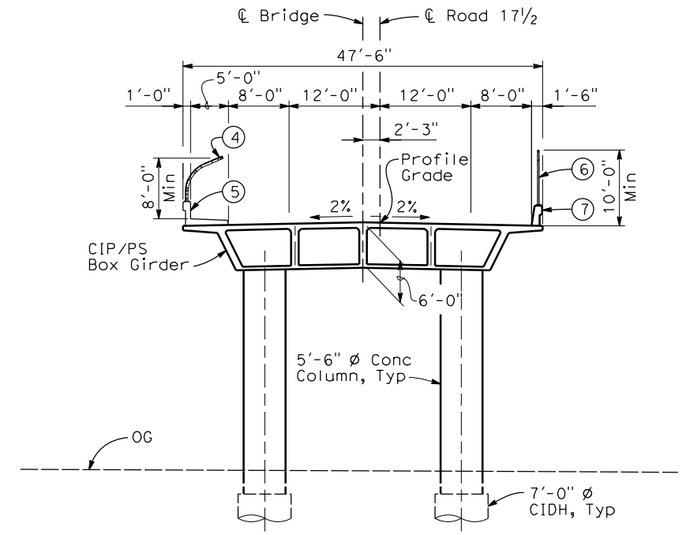
PROFILE GRADE

NTS



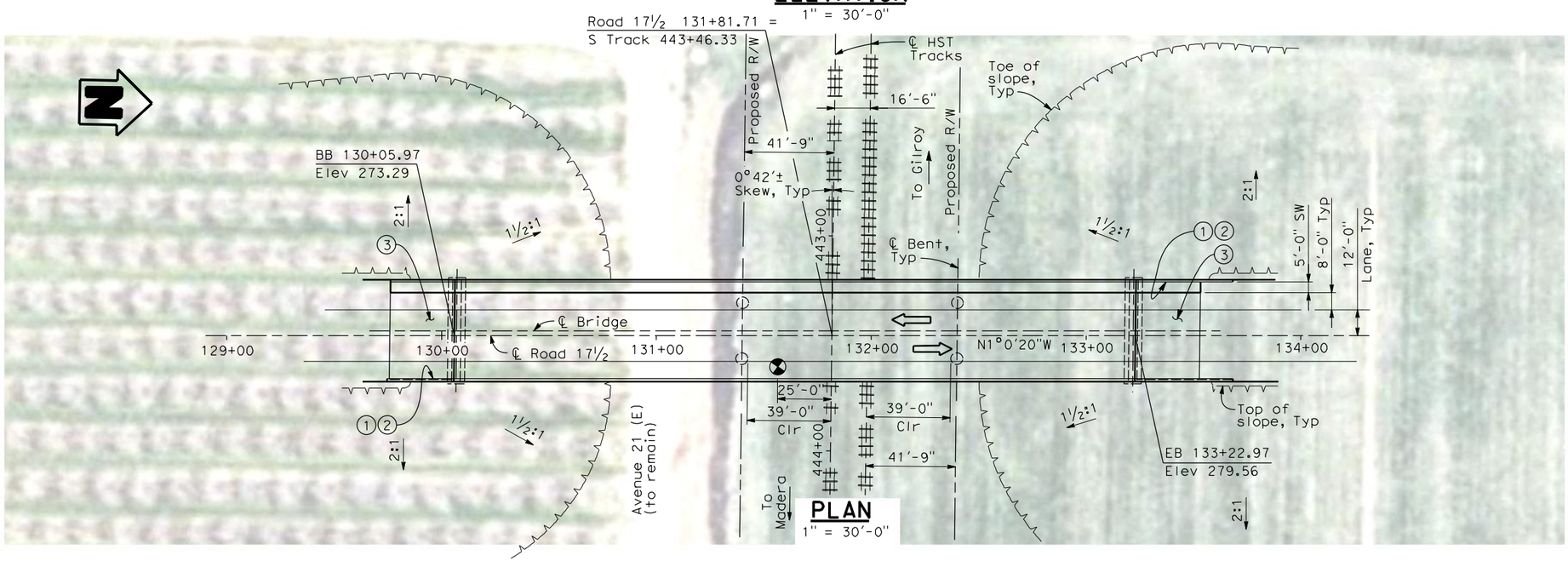
ELEVATION

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"



PLAN

1" = 30'-0"

NOTES:

1. Paint "Bridge No. WW-XX"
2. Paint "Road 17½ OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND:

Direction of traffic

Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	317'-0"
WIDTH	=	47'-6"
AREA	=	15,100 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 13

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

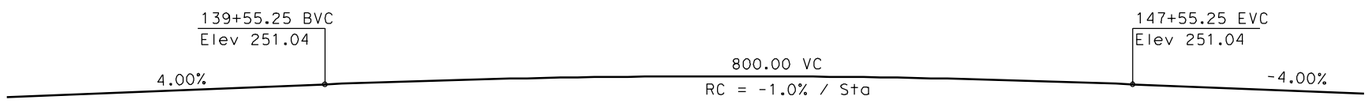
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSR MAIN LINE - HYBRID
AVENUE 21
ROAD 17½ OVERHEAD
PLANNING STUDY - SHEET 1 OF 2

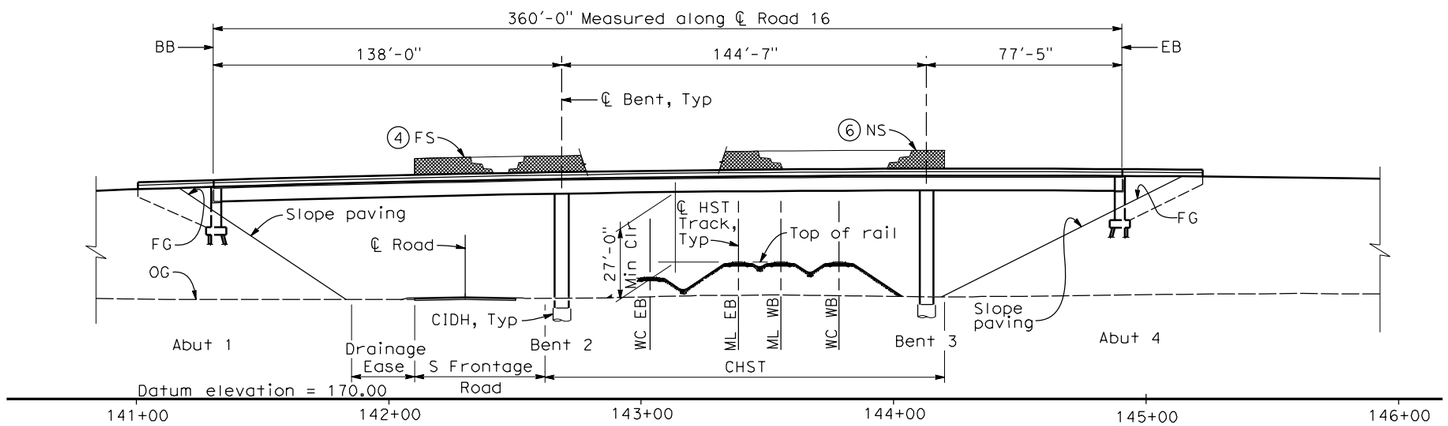
CONTRACT NO. HSR06-007
DRAWING NO. ST1102
SCALE As shown
SHEET NO. OF

cisnerose 3/30/2012 4:32:53 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\WW-MF-ST-OH_Road 17.5H-Loc 13.dgn



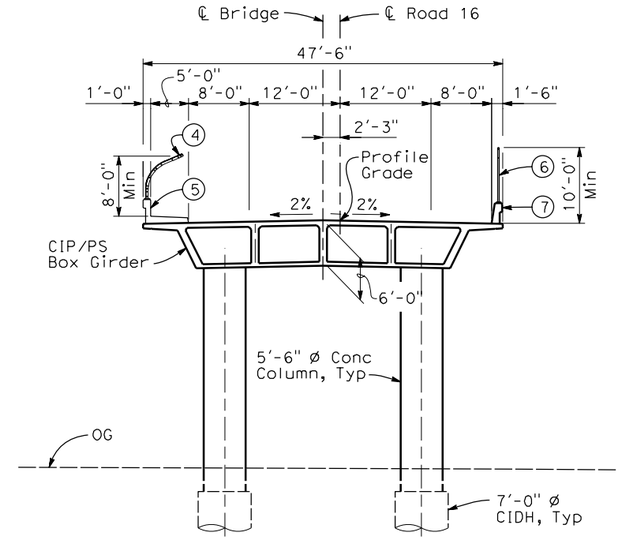
PROFILE GRADE

NTS



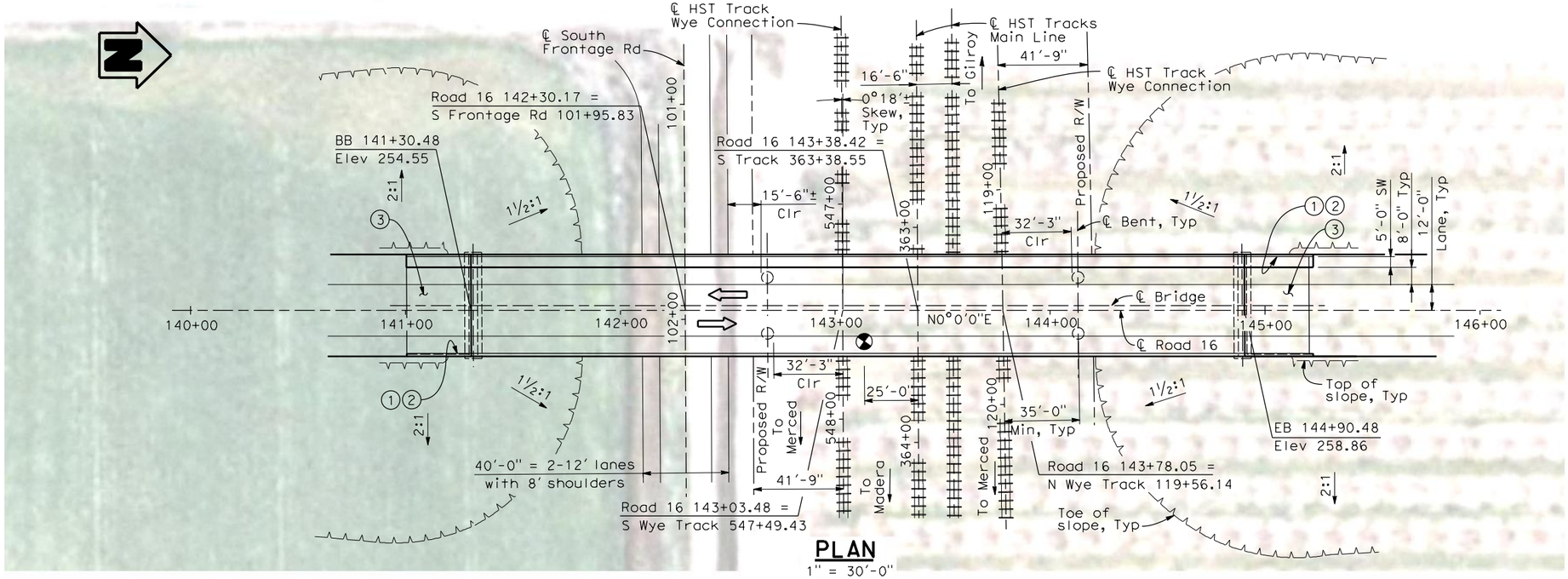
ELEVATION

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"



PLAN

1" = 30'-0"

NOTES:

1. Paint "Bridge No. WW-WX"
2. Paint "Road 16 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND/ABBREVIATIONS:

⇦ Direction of traffic

Point of minimum vertical clearance

ML = Main Line
WC = Wye Connection

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	360'-0"
WIDTH	=	47'-6"
AREA	=	17,100 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 12

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

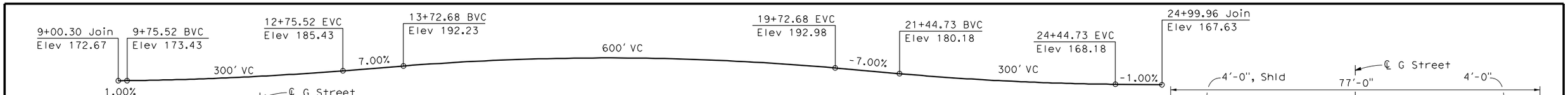
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE / UPRR/SR 99 WYE CONNECTION - HYBRID
AVENUE 21
ROAD 16 OVERHEAD
PLANNING STUDY

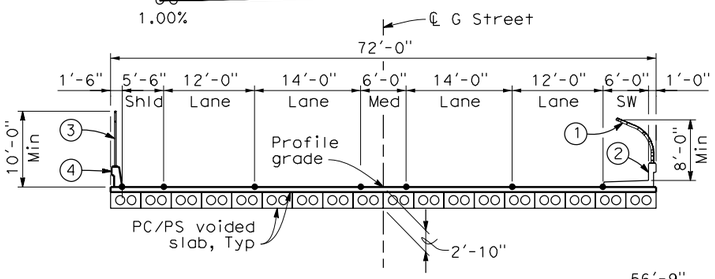
CONTRACT NO. HSR06-007
DRAWING NO. ST1101
SCALE As shown
SHEET NO. OF

c:\snerose 3/30/2012 4:33:41 PM \\usscrlfp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\W-MF-ST-OH_Road 16H-Loc 12.dgn



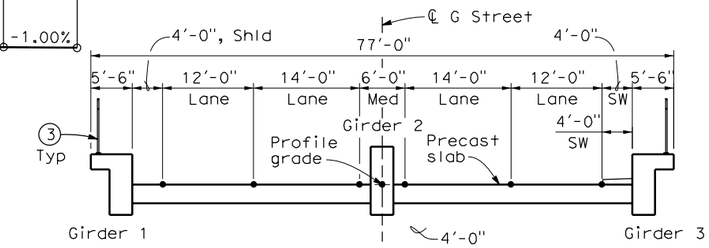
PROFILE GRADE

No Scale



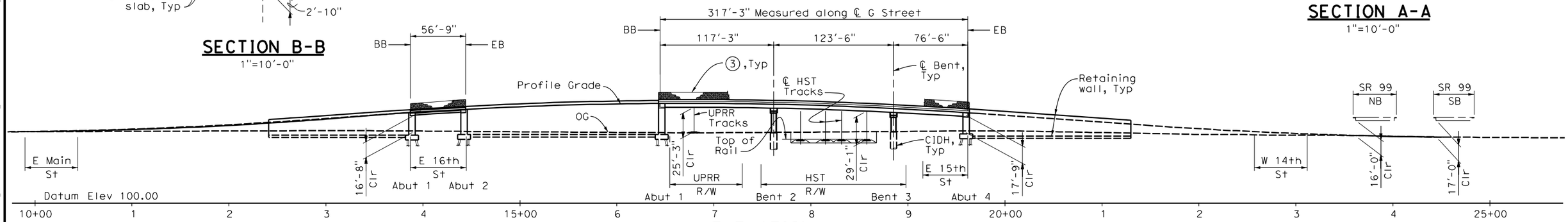
SECTION B-B

1"=10'-0"



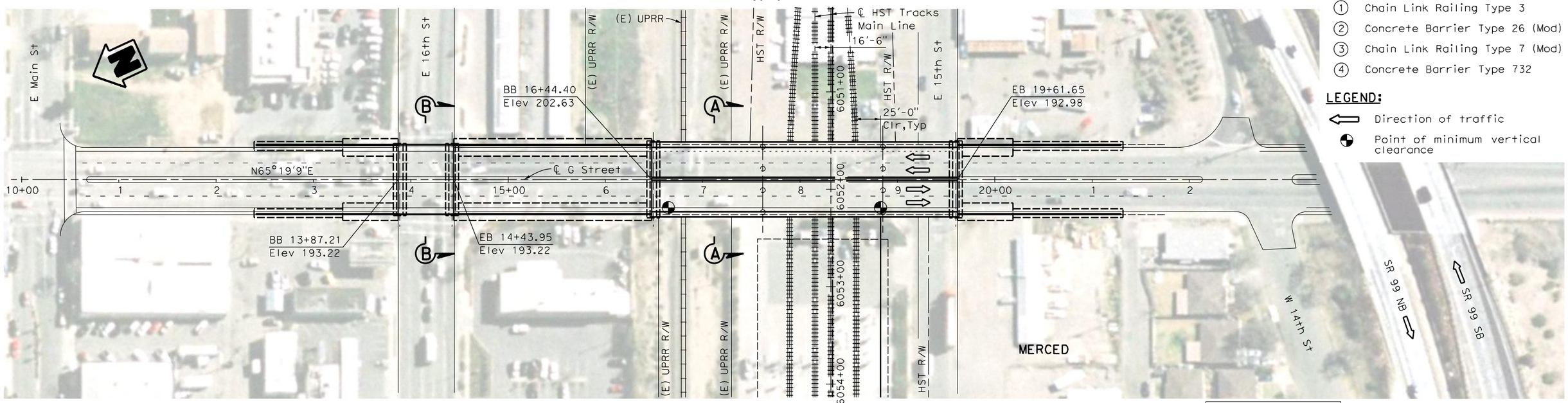
SECTION A-A

1"=10'-0"



ELEVATION

1" = 50'-0"



PLAN

1" = 50'-0"

NOTES:

1. Chain Link Railing Type 3
2. Concrete Barrier Type 26 (Mod)
3. Chain Link Railing Type 7 (Mod)
4. Concrete Barrier Type 732

LEGEND:

- Direction of traffic
- Point of minimum vertical clearance

LOCATION 64

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY L. LEUNG
IN CHARGE A. BOONE
DATE 01/13/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

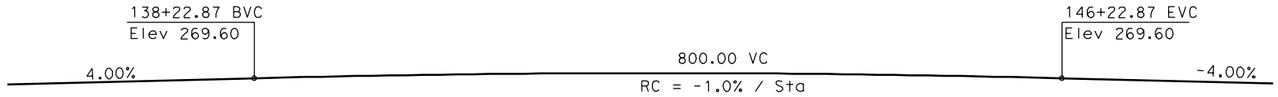
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MERCED CONNECTION - HYBRID
AVENUE 21
G STREET OVERHEAD
PLANNING STUDY

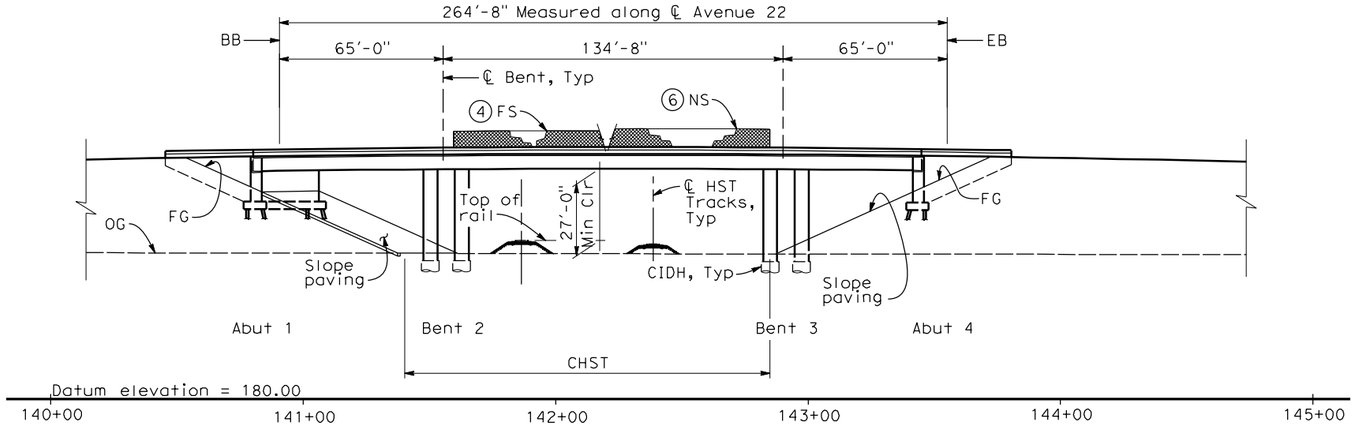
CONTRACT NO. HSR06-007
DRAWING NO. ST1180
SCALE As shown
SHEET NO. OF

cisnerose 3/31/2012 4:00:36 PM \\uscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\15%_Grade Structures_Revisions\W-MF-ST-OH_G Street-Loc64.dgn



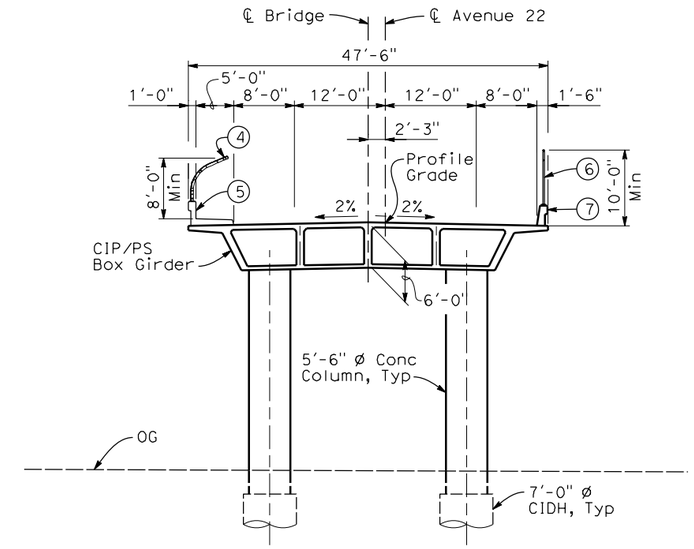
PROFILE GRADE

NTS



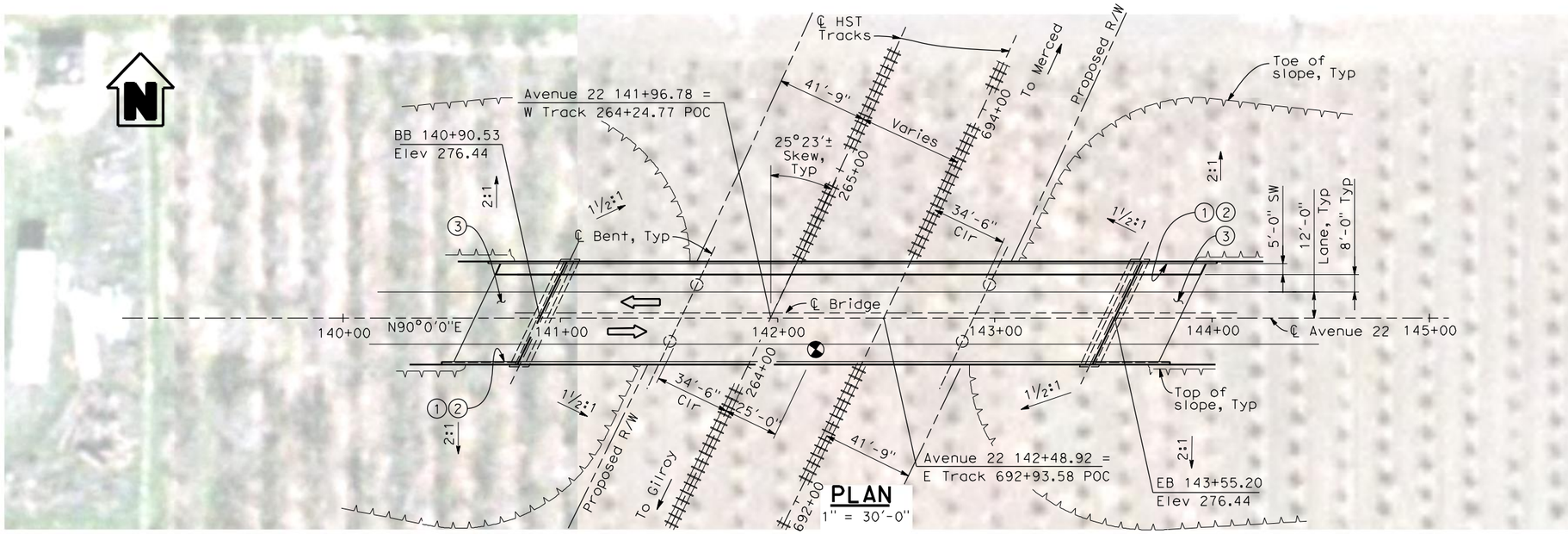
ELEVATION

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"



PLAN

1" = 30'-0"

NOTES:

1. Paint "Bridge No. AW-AW"
2. Paint "Avenue 22 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

DATE OF ESTIMATE	=	
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	264'-8"
WIDTH	=	47'-6"
AREA	=	12,600 ft^2
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 14

30 0 30 60

1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

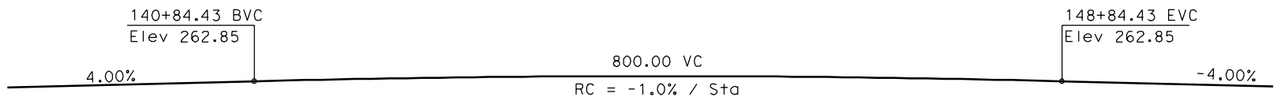
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 WYE CONNECTION - HYBRID
AVENUE 21
AVENUE 22 OVERHEAD
PLANNING STUDY

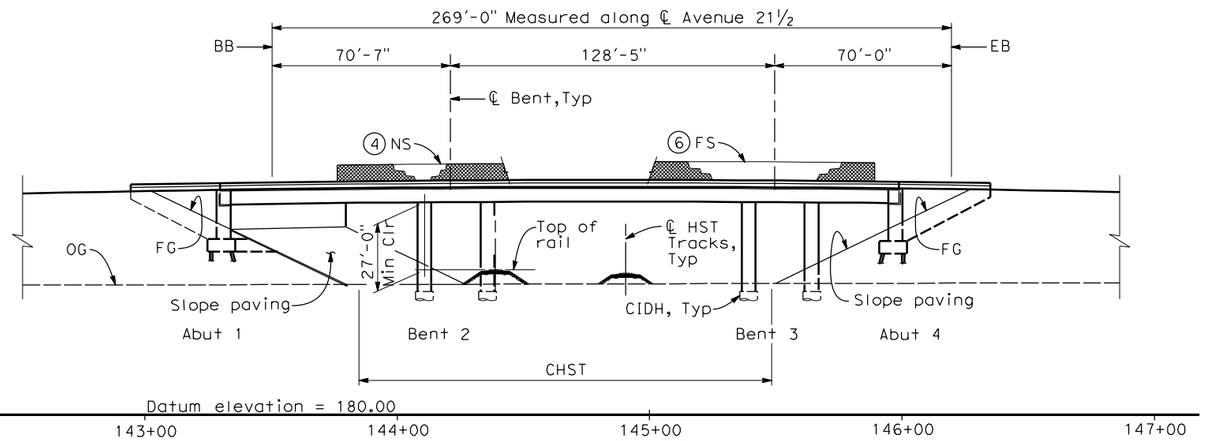
CONTRACT NO. HSR06-007
DRAWING NO. ST1106
SCALE As shown
SHEET NO. OF

3/30/2012 4:41:00 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\W-MF-ST-OH_Ave 22H-Loc 12.dgn
cisnerose



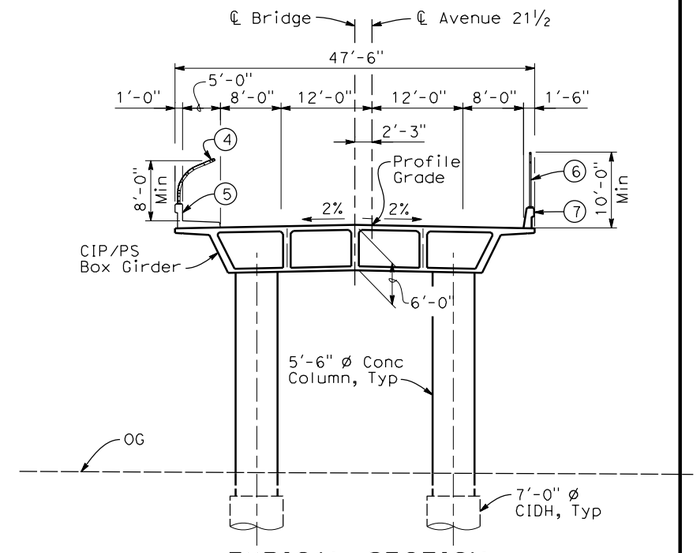
PROFILE GRADE

NTS



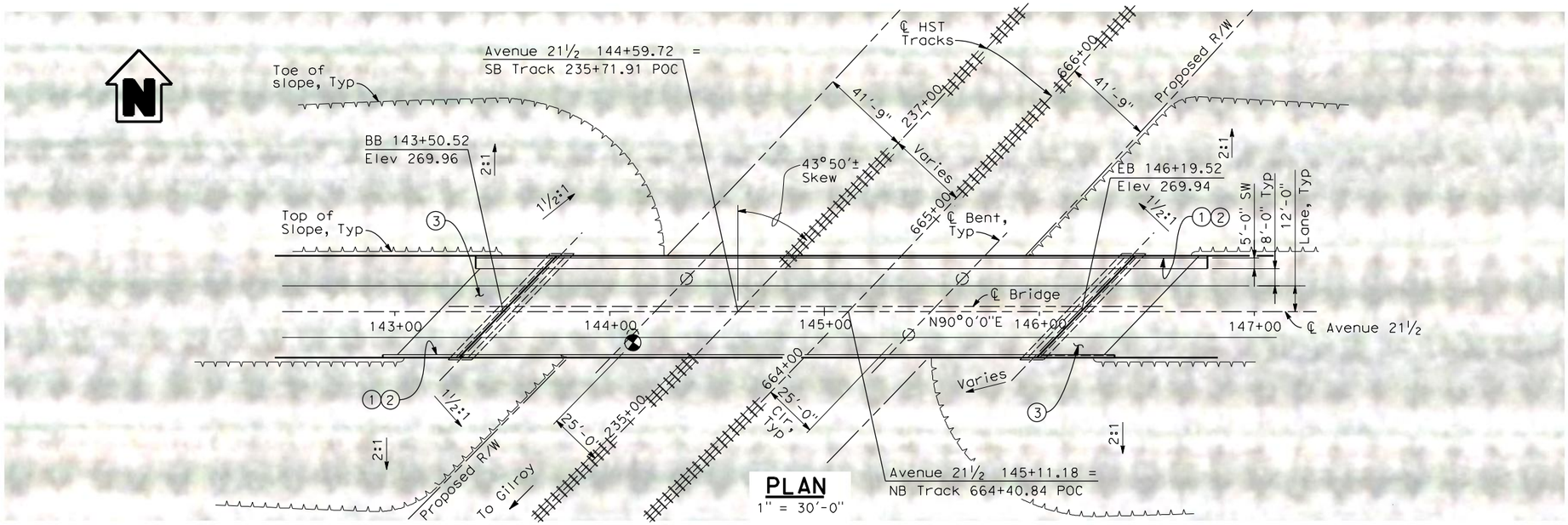
ELEVATION

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"



PLAN

1" = 30'-0"

NOTES:

1. Paint "Bridge No. AW-AW"
2. Paint "Avenue 21½ OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

DATE OF ESTIMATE	=	
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	269'-0"
WIDTH	=	47'-6"
AREA	=	12,800 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 15

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

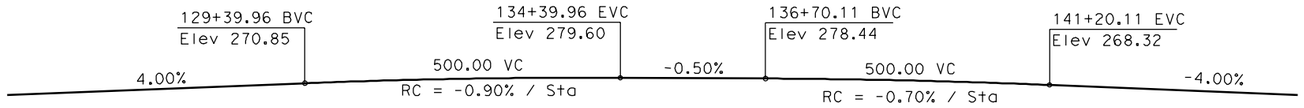
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 WYE CONNECTION - HYBRID
AVENUE 21
AVENUE 21½ OVERHEAD
PLANNING STUDY

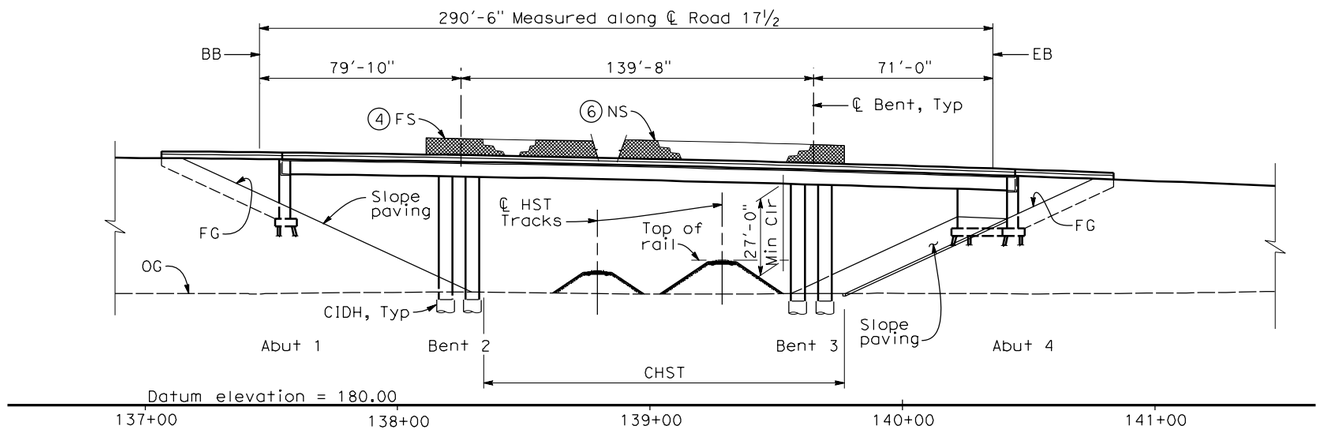
CONTRACT NO. HSR06-007
DRAWING NO. ST1115
SCALE As shown
SHEET NO. OF

cisnerose 3/30/2012 4:42:14 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\W-MF-ST-OH_Ave 21.5H-Loc 13.dgn



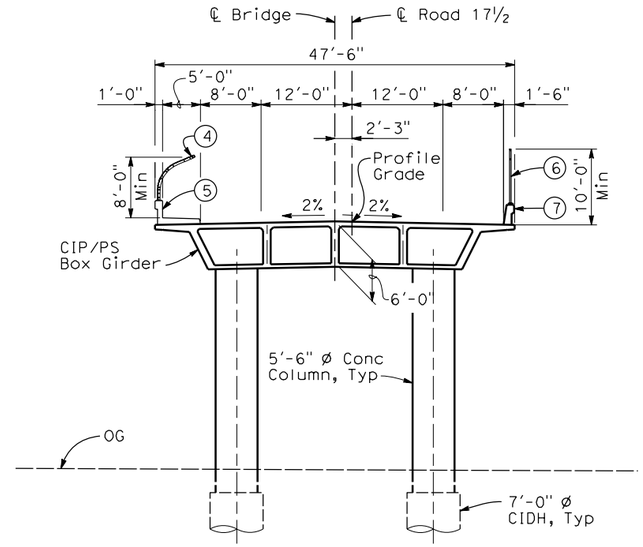
PROFILE GRADE

NTS



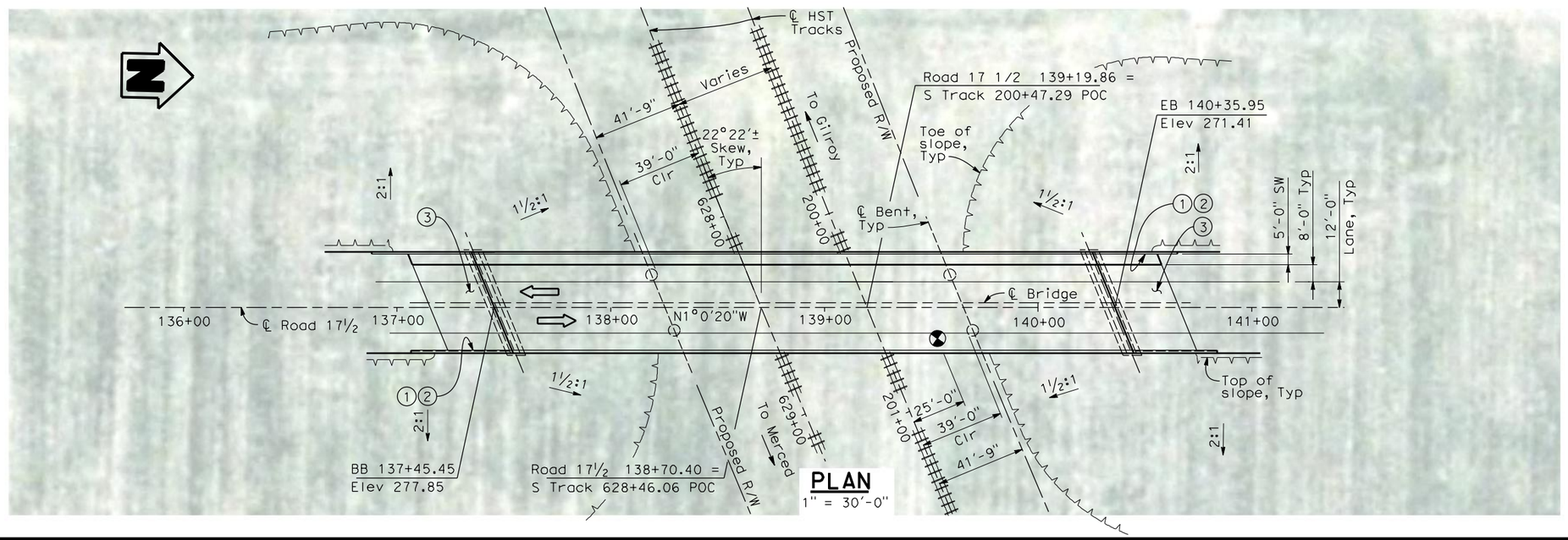
ELEVATION

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"



PLAN

1" = 30'-0"

NOTES:

1. Paint "Bridge No. WW-WW"
2. Paint "Road 17½ OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	290'-6"
WIDTH	=	47'-6"
AREA	=	13,800 ft²
COST/ ☐FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 13

30 0 30 60

1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 WYE CONNECTION - HYBRID
AVENUE 21
ROAD 17½ OVERHEAD
PLANNING STUDY - SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. ST1103
SCALE As shown
SHEET NO. OF

\\usscr1fp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\W-MF-ST-OH_Road 17.5WCH-Loc 14.dgn 3/30/2012 4:44:13 PM cisnerose

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
				GENERAL		
		B6990-B	AVE 21 HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 1 OF 1
		B6992-B	AVE 21 HYBRID	GENERAL	ABBREVIATIONS, SYMBOLS AND NOTES	SHEET 1 OF 1
		B7000-B	AVE 21 HYBRID		INDEX MAP	SHEET 1 OF 2
		B7001-B	AVE 21 HYBRID		INDEX MAP	SHEET 2 OF 2
		CB7005-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	KEY MAP	SHEET 1 OF 1
		CB7006-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	KEY MAP	SHEET 1 OF 1
		CT6990-B	AVE 21 HYBRID	HIGHWAY	TYPICAL CROSS SECTIONS	SHEET 1 OF 1
		CT6992-B	AVE 21 HYBRID		GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN	SHEET 1 OF 2
		CT6993-B	AVE 21 HYBRID		GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN	SHEET 2 OF 2
				AVE 21 HYBRID (LAYOUT)		
43		CT2001-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 8	LAYOUT	SHEET 1 OF 3
43		CT2002-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 8	LAYOUT	SHEET 2 OF 3
43		CT2003-A	BNSF MAIN LINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 8	LAYOUT	SHEET 3 OF 3
18		CT7034-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	LAYOUT	SHEET 1 OF 3
18		CT7035-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	LAYOUT	SHEET 2 OF 3
18		CT7036-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	LAYOUT	SHEET 3 OF 3
19		CT7037-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 1 OF 5
19		CT7038-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 2 OF 5
19		CT7039-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 3 OF 5
19		CT7040-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 4 OF 5
19		CT7041-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 5 OF 5
19		CT7042-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - LE GRAND RD IC SR99 SB ON-RAMP	LAYOUT	SHEET 1 OF 2
19		CT7043-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - LE GRAND RD IC SR99 SB OFF-RAMP	LAYOUT	SHEET 2 OF 2
				AVE 21 HYBRID (PROFILE)		
43		CT3001-A	BNSF MAINLINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 8	PROFILE	SHEET 1 OF 3
43		CT3002-A	BNSF MAINLINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 8	PROFILE	SHEET 2 OF 3
43		CT3003-A	BNSF MAINLINE - (AVE 21 HYBRID)	GRADE SEPARATION - AVENUE 8	PROFILE	SHEET 3 OF 3
18		CT8045-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	PROFILE	SHEET 1 OF 3
18		CT8046-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	PROFILE	SHEET 2 OF 3
18		CT8047-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	PROFILE	SHEET 3 OF 3
19		CT8048-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 1 OF 5
19		CT8049-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 2 OF 5
19		CT8050-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 3 OF 5
19		CT8051-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 4 OF 5
19		CT8052-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 5 OF 5
19		CT8053-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP	PROFILE	SHEET 1 OF 4
19		CT8054-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP	PROFILE	SHEET 2 OF 4
19		CT8055-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP	PROFILE	SHEET 3 OF 4
19		CT8056-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP	PROFILE	SHEET 4 OF 4

REV	DATE	BY	CHK	APP	DESCRIPTION
2	02/24/12	RG			
1	12/28/11	RG			

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

AVE 21 HYBRID
GENERAL
INDEX OF DRAWINGS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B6990-B
SCALE NONE
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ABBREVIATIONS

ALIGNMENT

HORIZONTAL

BC	BEGINNING OF CURVE
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUNT CURVES
PI	POINT OF INTERSECTION OF TWO TANGENTS
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
V, DS	DESIGN VELOCITY IN MILES PER HOUR

VERTICAL

BVC	BEGIN OF VERTICAL CURVE
EVC	END OF VERTICAL CURVE
PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

ALT	ALTERNATIVE
AVE	AVENUE
BB	BEGIN BRIDGE
BEG	BEGIN
BLVD	BOULEVARD
℄	CENTER LINE
CL	CENTERLINE, CLASS
CLR	CLEAR
COL	COLUMN
DWG	DRAWING
EB	END BRIDGE
ELEV	ELEVATION
EQ	EQUATION
ES	EDGE OF SIDEWALK
ETW	EDGE OF TRAVELED WAY
EXIST(E)	EXISTING
FL	FLOW LINE
HORIZ	HORIZONTAL
HP	HINGE POINT
HST	HIGH SPEED TRAIN
HWY	HIGHWAY
IC	INTERCHANGE
IN	INCH
L	LENGTH
LT	LEFT
MBGR	METAL BEAM GUARD RAIL
ML	MAINLINE
MPH	MILES PER HOUR
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
No, NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVERHEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL, FG	PROFILE GRADE LINE
RET	RETAINING
RR	RAILROAD
RD	ROAD
R/W	RIGHT OF WAY
RT	RIGHT
SB	SOUTH BOUND
SHLD	SHOULDER
SR	STATE ROUTE
SHT	SHEET
SS	SANITARY SEWER
SSD	STOPPING SIGHT DISTANCE
ST	STREET
STA	STATION
STD	STANDARD
SD	STORM DRAIN
STRUCT, STR	STRUCTURE
T	TANGENT
TEL	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE
TOR	TOP OF RAIL
TK	TRACK
TYP	TYPICAL
TBD	TO BE DETERMINED
TF	TELECOMMUNICATIONS FIBER OPTIC
UPRR	UNION PACIFIC RAILROAD
VAR	VARIES
V VERT	VERTICAL
W	WATER, WEST

SYMBOLS

	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY OR EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
G16	GAS LINE (16")
TC	COMMUNICATION LINE
W	WATER LINE
FO	FIBER OPTIC LINE
E	ELECTRICAL LINE
	ELECTRICAL TOWER
S	SEWER LINE
SD	STORM DRAIN LINE
O	FUEL LINE
TC	TELEPHONE LINE
P12	PETROLEUM LINE (12")
(OH)	OVERHEAD
	NORTH ARRROW
	PVI
	MBGR
	DIRECTION OF TRAVEL
250	PROPOSED CONTOUR

REV	DATE	BY	CHK	APP	DESCRIPTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID
GENERAL
ABBREVIATIONS, SYMBOLS AND NOTES
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B6992-B
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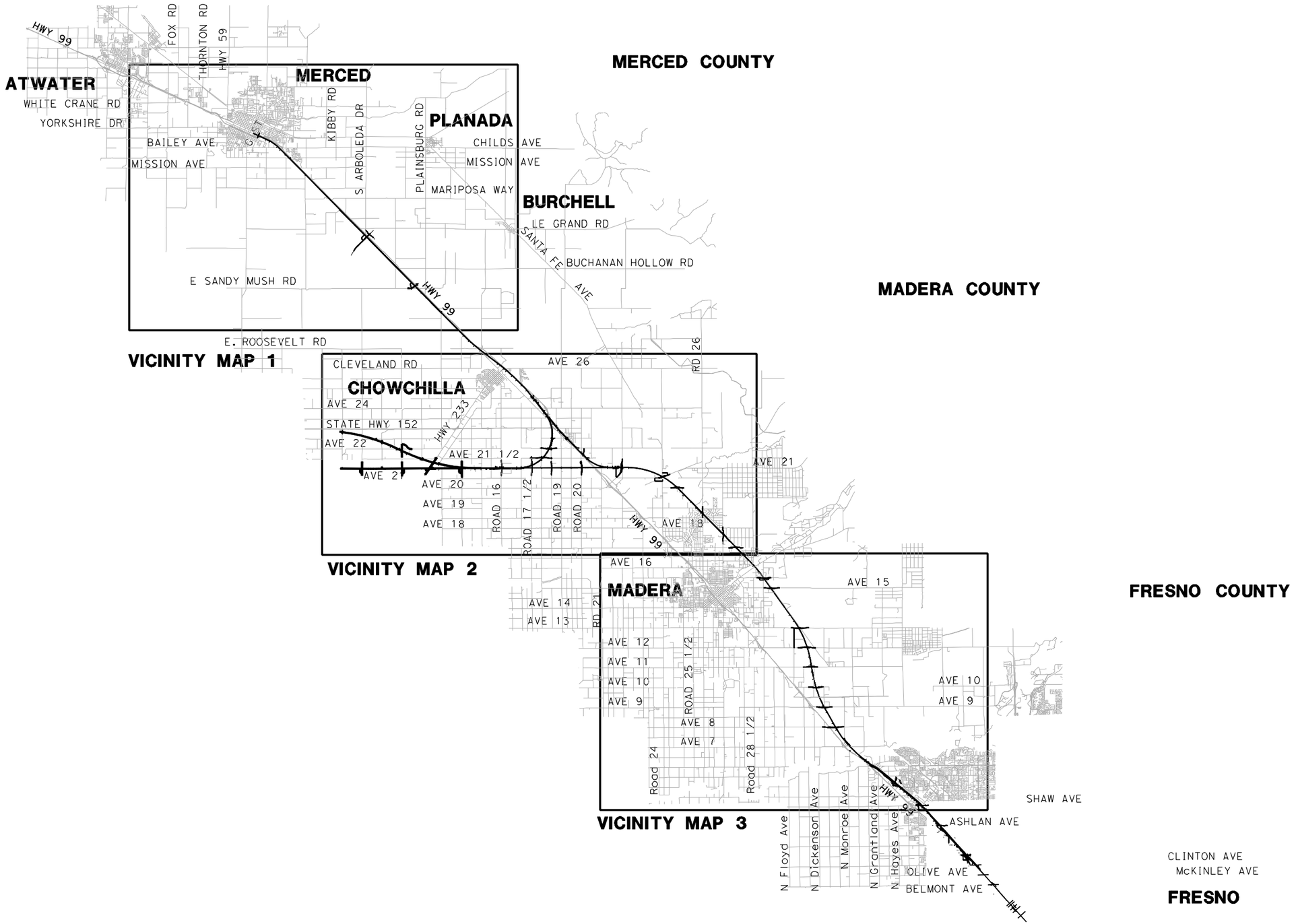

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1	12/12/2011	RG			

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID

INDEX MAP
SHEET 1 OF 2

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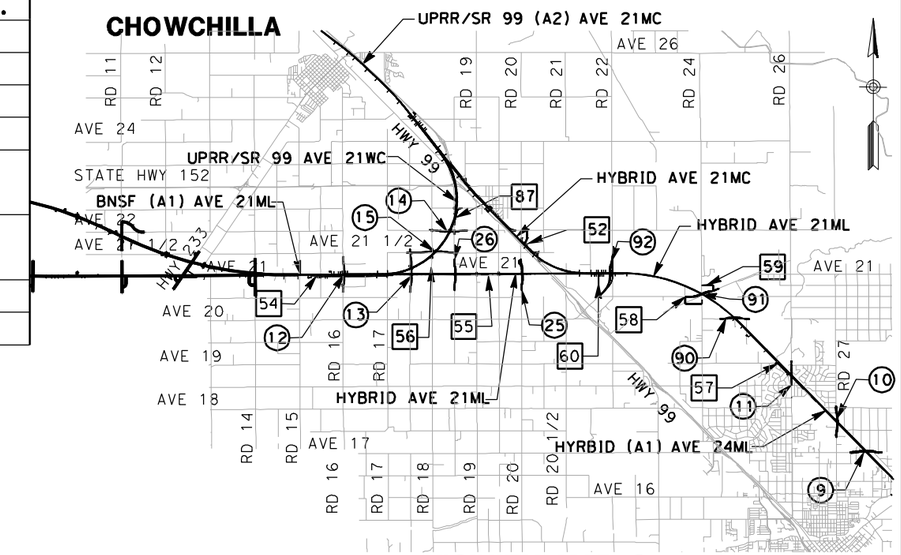
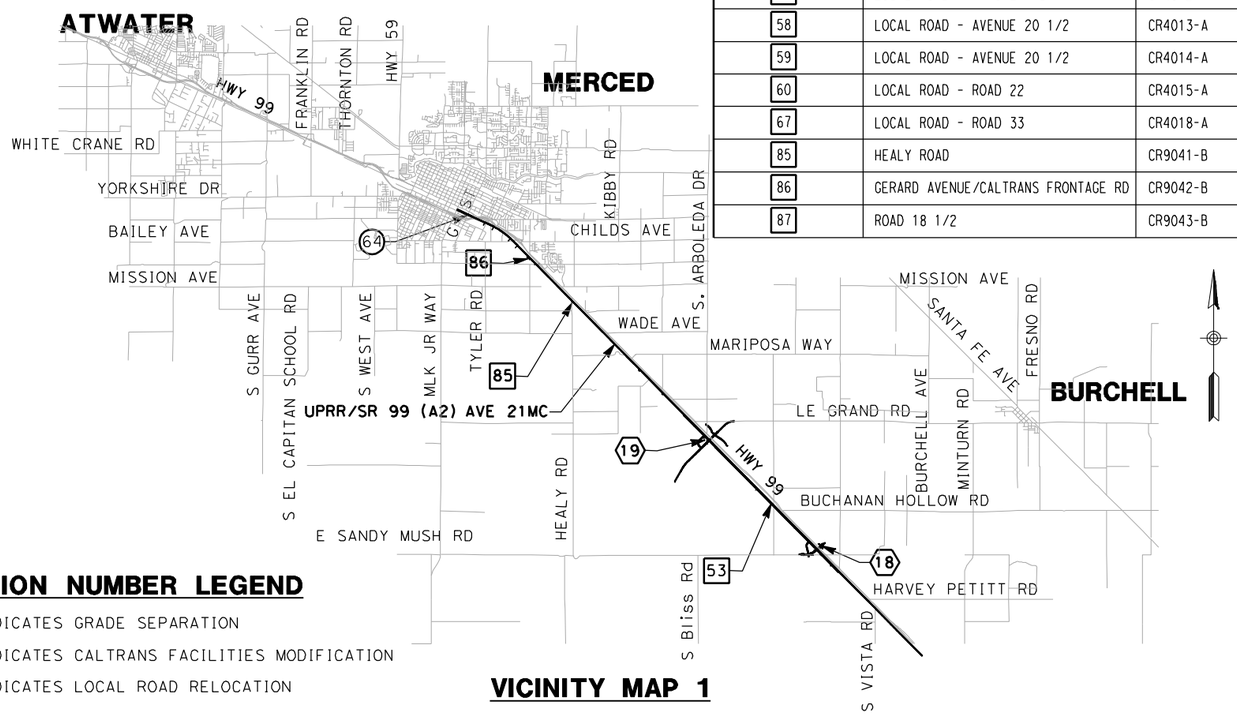
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
1	GRADE SEPARATION - AVENUE 9	CT0001-A - CT0003-A	ST1001
2	GRADE SEPARATION - AVENUE 10	CT0004-A - CT0006-A	ST1002
3	GRADE SEPARATION - AVENUE 11	CT0007-A - CT0009-A	ST1003
4	GRADE SEPARATION - AVENUE 12	CT0010-A - CT0012-A	ST1004
5	GRADE SEPARATION - AVENUE 13	CT0013-A - CT0016-A	ST1005
6	GRADE SEPARATION - AVENUE 15	CT0017-A - CT0019-A	ST1006
7	GRADE SEPARATION - AVENUE 15 1/2	CT0020-A - CT0022-A	ST1007
9	GRADE SEPARATION - AVENUE 17	CT0026-A - CT0028-A	ST1009
10	GRADE SEPARATION - ROAD 27	CT0029-A - CT0031-A	ST1010
11	GRADE SEPARATION - ROAD 26	CT0032-A - CT0034-A	ST1011
12	GRADE SEPARATION - ROAD 16	CT5000-B - CT5003-B	ST1101
13	GRADE SEPARATION - ROAD 17 1/2	CT5004-B - CT5007-B	ST1102 - ST1103
14	GRADE SEPARATION - AVENUE 22	CT5016-B - CT5018-B	ST1106
15	GRADE SEPARATION - AVENUE 21 1/2	CT5019-B - CT5022-B	ST1115
25	GRADE SEPARATION - ROAD 20	CT0076-A - CT0078-A	ST1026
26	GRADE SEPARATION - ROAD 18 1/2	CT0079-A - CT0081-A	ST1027
64	GRADE SEPARATION - G STREET	CT0149-A	ST1180

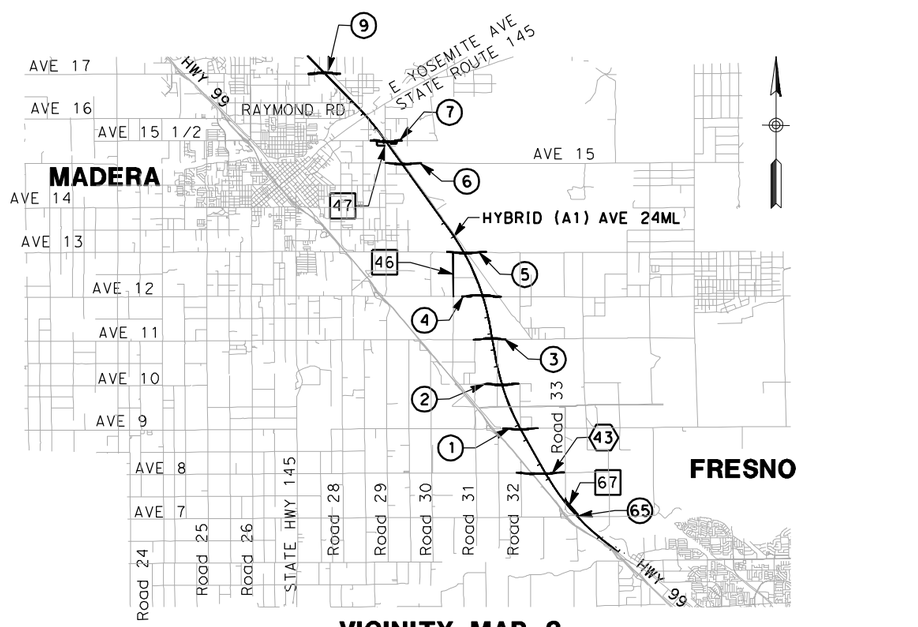
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
65	GRADE SEPARATION - AVENUE 7	CT0146-A - CT0148-A	ST1070
90	GRADE SEPARATION - AVENUE 20	CT0066-A - CT0068-A	ST1090
91	GRADE SEPARATION - AVENUE 20 1/2	CT0069-A - CT0071-A	ST1091
92	GRADE SEPARATION - ROAD 22	CT0073-A - CT0075-A	ST1092
18	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	CT7034-B - CT7036-B	ST1113
19	GRADE SEPARATION - LE GRAND RD INTERCHANGE	CT7037-B - CT7043-B	ST1114
43	CALTRANS - AVENUE 8	CT2001-A - CT2003-A	ST1000
46	LOCAL ROAD - ROAD 30 1/2	CR4000-A	
47	LOCAL ROAD - ROAD 29	CR4001-A	
52	FAIRMEAD BLVD	CR9017-B - CR9020-B	
53	PROPOSED WEST FRONTAGE ROAD	CR9021-B - CR9028-B	
54	AVENUE 21 AVENUE 21	CR9029-B CR9032-B - CR9033-B	
55	ROAD 19 & ROAD 19 1/2	CR9040-B	
56	ROAD 18	CR9035-B	
57	LOCAL ROAD - HANOVER RD	CR4012-A	
58	LOCAL ROAD - AVENUE 20 1/2	CR4013-A	
59	LOCAL ROAD - AVENUE 20 1/2	CR4014-A	
60	LOCAL ROAD - ROAD 22	CR4015-A	
67	LOCAL ROAD - ROAD 33	CR4018-A	
85	HEALY ROAD	CR9041-B	
86	GERARD AVENUE/CALTRANS FRONTAGE RD	CR9042-B	
87	ROAD 18 1/2	CR9043-B	



VICINITY MAP 2



VICINITY MAP 1



VICINITY MAP 3

9000 0 9000 18000
GRAPHIC SCALE

LOCATION NUMBER LEGEND

(X) - INDICATES GRADE SEPARATION

⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION

[X] - INDICATES LOCAL ROAD RELOCATION

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2	02/24/2012	RG			
1	12/12/2011	RG			

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID

INDEX MAP
SHEET 2 OF 2

CONTRACT NO. HSR06-007
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CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB7005-B
SCALE AS SHOWN
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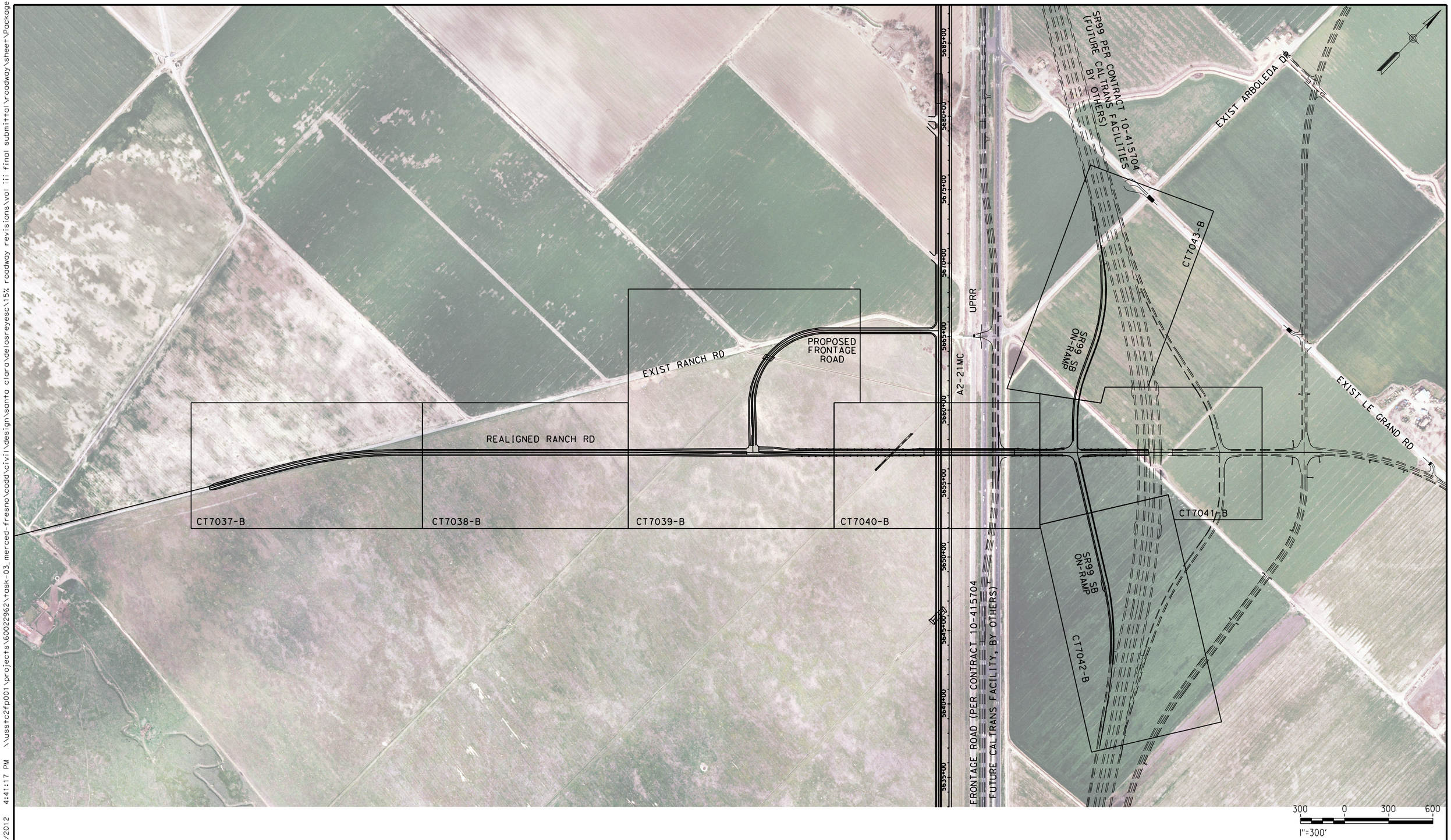

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CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
KEY MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CB7006-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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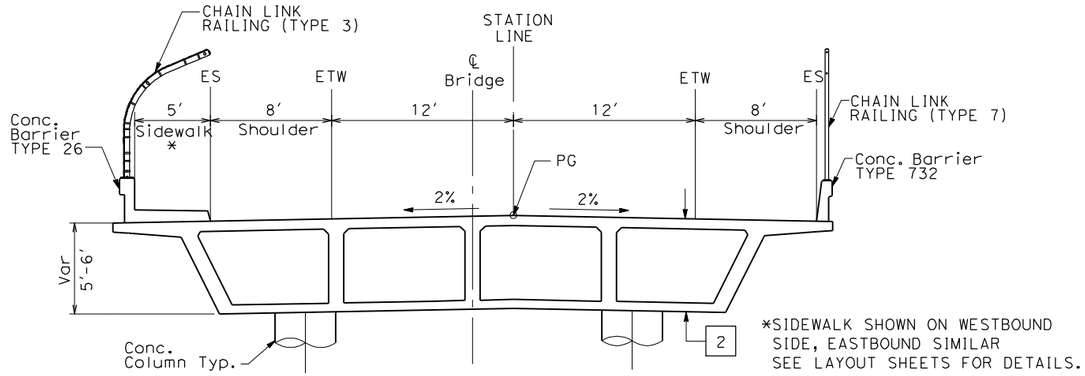
NOTES:

1. DIMENSIONS OF EXISTING PAVEMENT WIDTHS ARE BASED ON MEASUREMENTS MADE IN THE FIELD AND ARE APPROXIMATE.
2. PAVEMENT SECTIONS ARE TO BE DETERMINED. GEOTECHNICAL INVESTIGATIONS WILL BE CONDUCTED IN A SUBSEQUENT PHASE TO DETERMINE STRUCTURAL SECTIONS FOR EACH CROSSING.
3. SPACING OF BENCHES ON PROPOSED FILL SECTIONS ARE TO BE DETERMINED.
4. RIGHT-OF-WAY (R/W) WIDTH IS FOR INFORMATION ONLY. EXACT WIDTH TO BE DETERMINED IN COORDINATION WITH AFFECTED AGENCY.



*SIDEWALK SHOWN ON WESTBOUND SIDE, EASTBOUND SIMILAR SEE LAYOUT SHEETS FOR DETAILS.

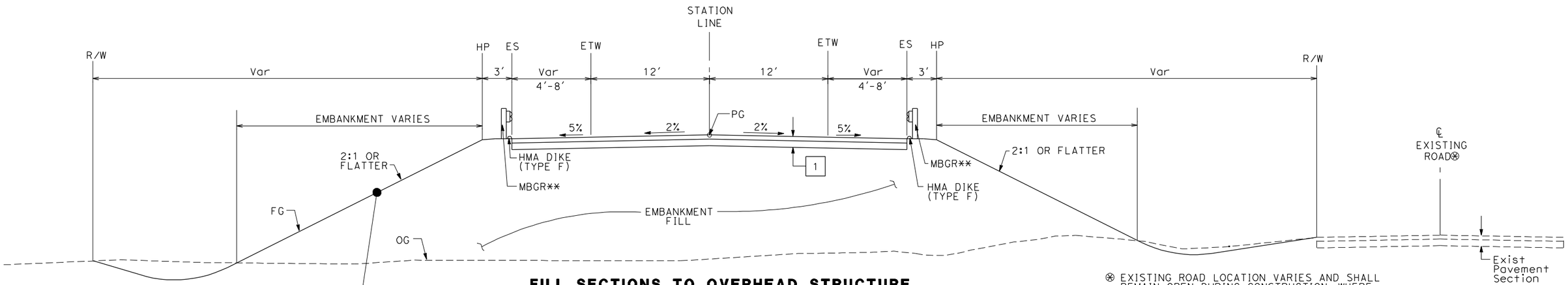
OVERHEAD STRUCTURE

SEE STRUCTURAL PLANS

STRUCTURAL SECTIONS:

1 — HMA TYPE A
AB CLASS 2

2 — CAST IN PLACE / PRESTRESSED BOX GIRDER (6' STRUCTURE DEPTH)

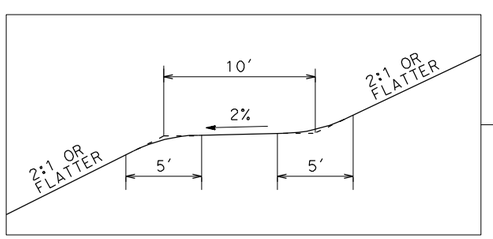


FILL SECTIONS TO OVERHEAD STRUCTURE

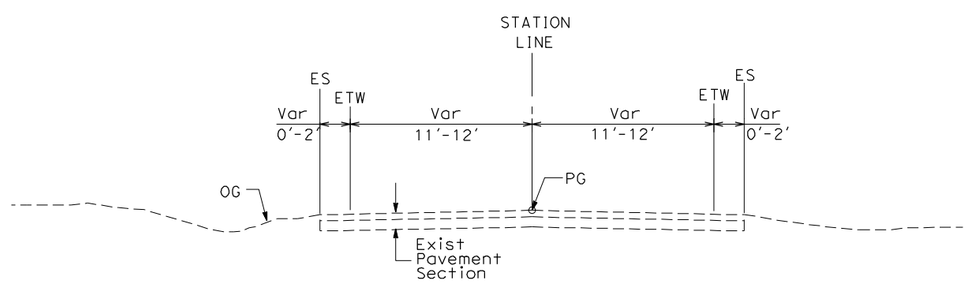
WEST SIDE SHOWN (EAST SIDE SIMILAR)

⊗ EXISTING ROAD LOCATION VARIES AND SHALL REMAIN OPEN DURING CONSTRUCTION. WHERE SHOWN ON THE PLAN CLOSE AND OBLITERATE EXISTING ROADWAY SUBSEQUENT TO CONSTRUCTION OF THE REALIGNED ROADWAY.

** EXACT LIMITS OF MBGR PER AGENCY REQUIREMENTS.



BENCHING DETAIL



EXISTING LOCAL ROAD

WEST SIDE SHOWN (EAST SIDE SIMILAR)
SEE LAYOUT SHEETS FOR ACTUAL ROADWAY WIDTHS AT EACH CROSSING

TYPICAL CROSS SECTIONS ON THIS SHEET APPLY TO THE FOLLOWING ROADWAYS FOR ALIGNMENT AVE 21 HYBRID:

NO.	STREET NAME
1	Le Grand
2	E. Sandy Mush Road
3	AVENUE 8

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY K. OAKS
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MERCED TO FRESNO
AVE 21 HYBRID
HIGHWAY
TYPICAL CROSS SECTIONS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CT6990-B
SCALE NTS
SHEET NO. ### OF ###

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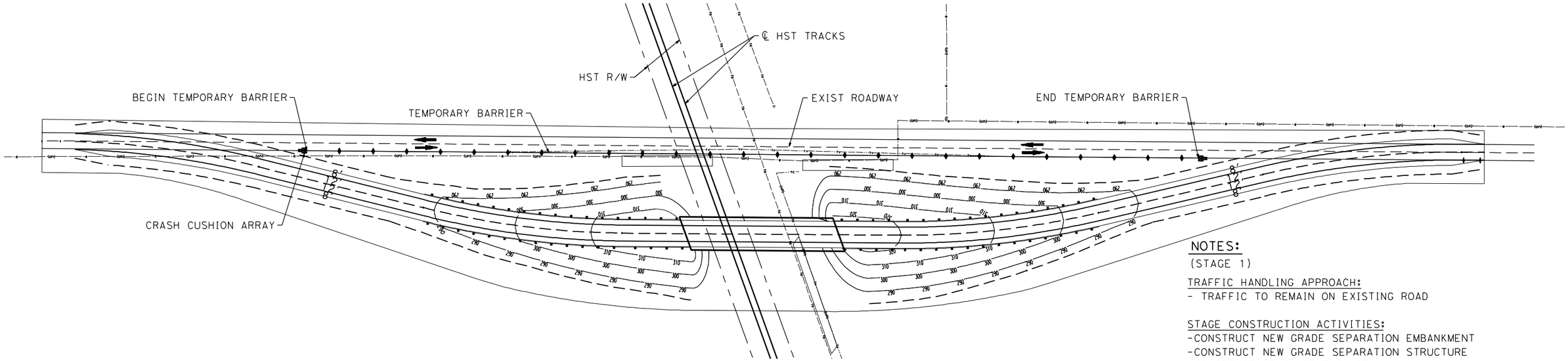
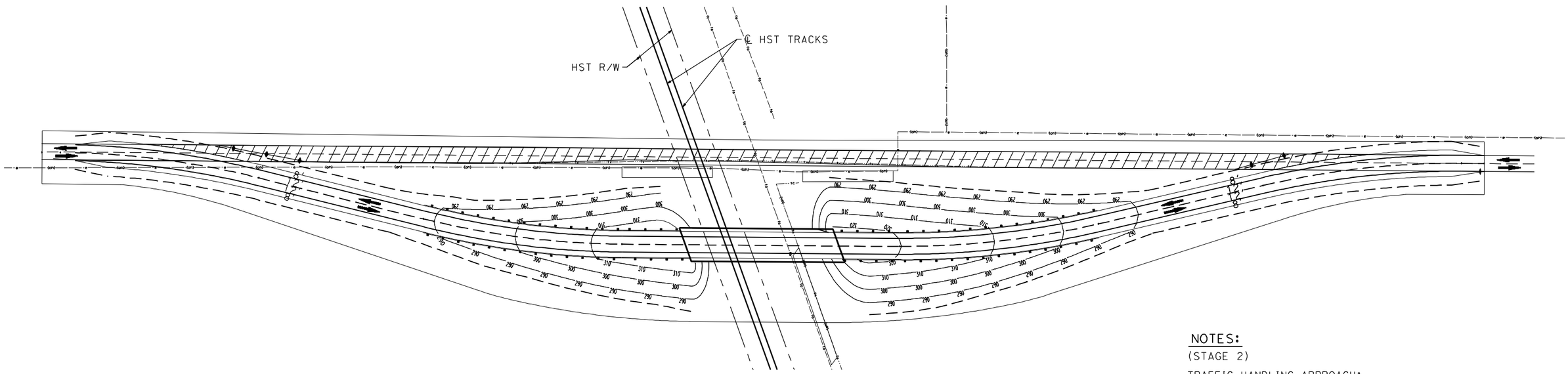


STAGE CONSTRUCTION (STAGE 1)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- TRAFFIC TO REMAIN ON EXISTING ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT NEW GRADE SEPARATION EMBANKMENT
-CONSTRUCT NEW GRADE SEPARATION STRUCTURE
-CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 2)

NOTES:
(STAGE 2)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT REALIGNED ROAD CONFORMS
-COMPLETE DRAINAGE FACILITIES
-REMOVE BASE AND SURFACING OF EXIST ROAD

LEGEND:

- CRASH CUSHION ARRAY (ARRAY TS 11)
- TEMPORARY BARRIER (TYPE K)
- DIRECTION OF TRAVEL
- REMOVE BASE AND SURFACING (EXIST ROAD)

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY SW/FD
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IN CHARGE AB
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID

GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CT6992-B
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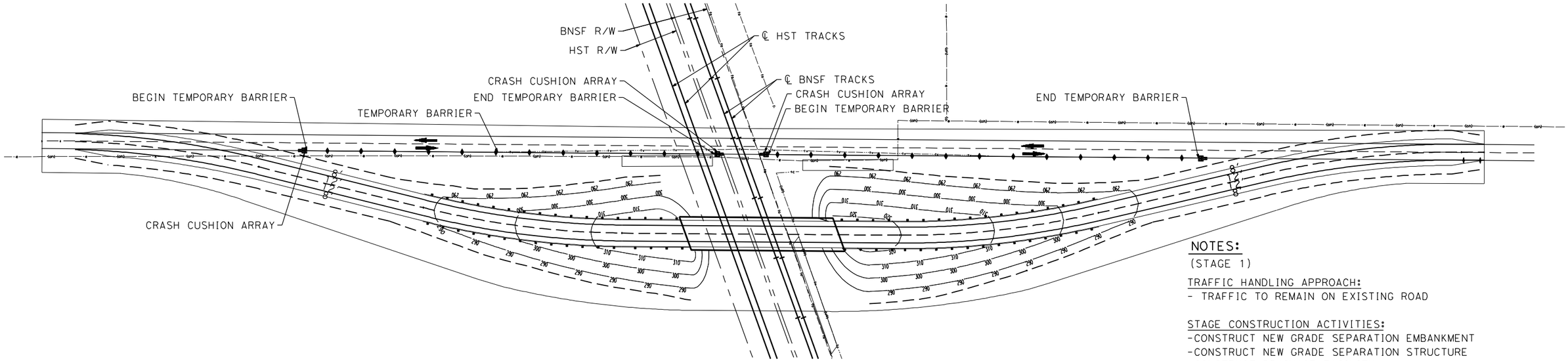
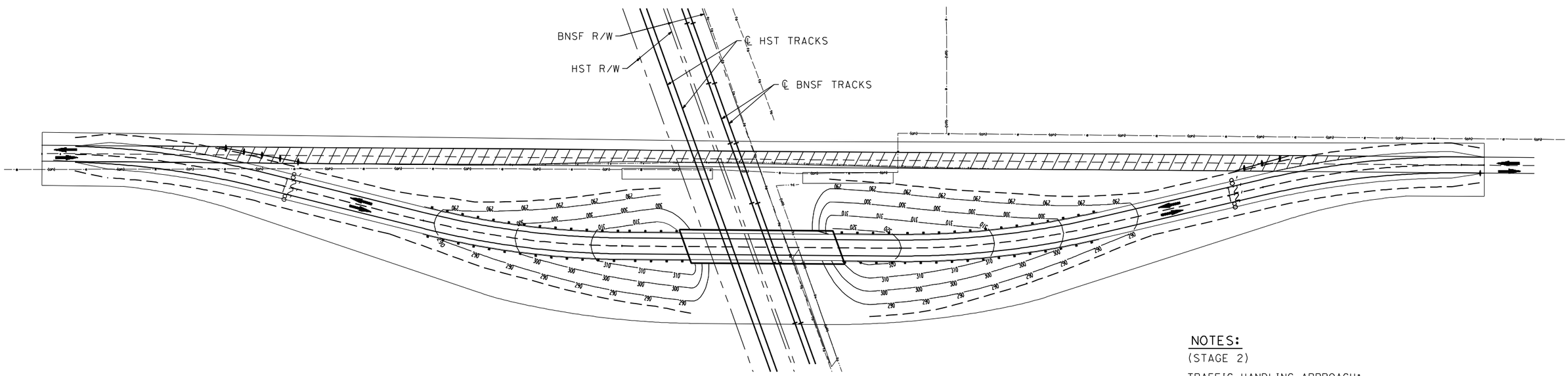


STAGE CONSTRUCTION (STAGE 1)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- TRAFFIC TO REMAIN ON EXISTING ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT NEW GRADE SEPARATION EMBANKMENT
-CONSTRUCT NEW GRADE SEPARATION STRUCTURE
-CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 2)

NOTES:
(STAGE 2)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT REALIGNED ROAD CONFORMS
-COMPLETE DRAINAGE FACILITIES
-REMOVE SURFACE AND BASE OF EXIST ROAD

LEGEND:

- CRASH CUSHION ARRAY (ARRAY TS11)
- TEMPORARY BARRIER (TYPE K)
- DIRECTION OF TRAVEL
- REMOVE BASE AND SURFACING (EXIST ROAD)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY SW
DRAWN BY SW/FD
CHECKED BY JZ
IN CHARGE AB
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID

GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CT6993-B
SCALE NO SCALE
SHEET NO. ### OF ###

6/28/2011 9:28:33 AM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 4 - ave 21 hybrid\volume 2b - ave 21 hybrid wye caltrans facilities\staging\CT6993-B.dgn
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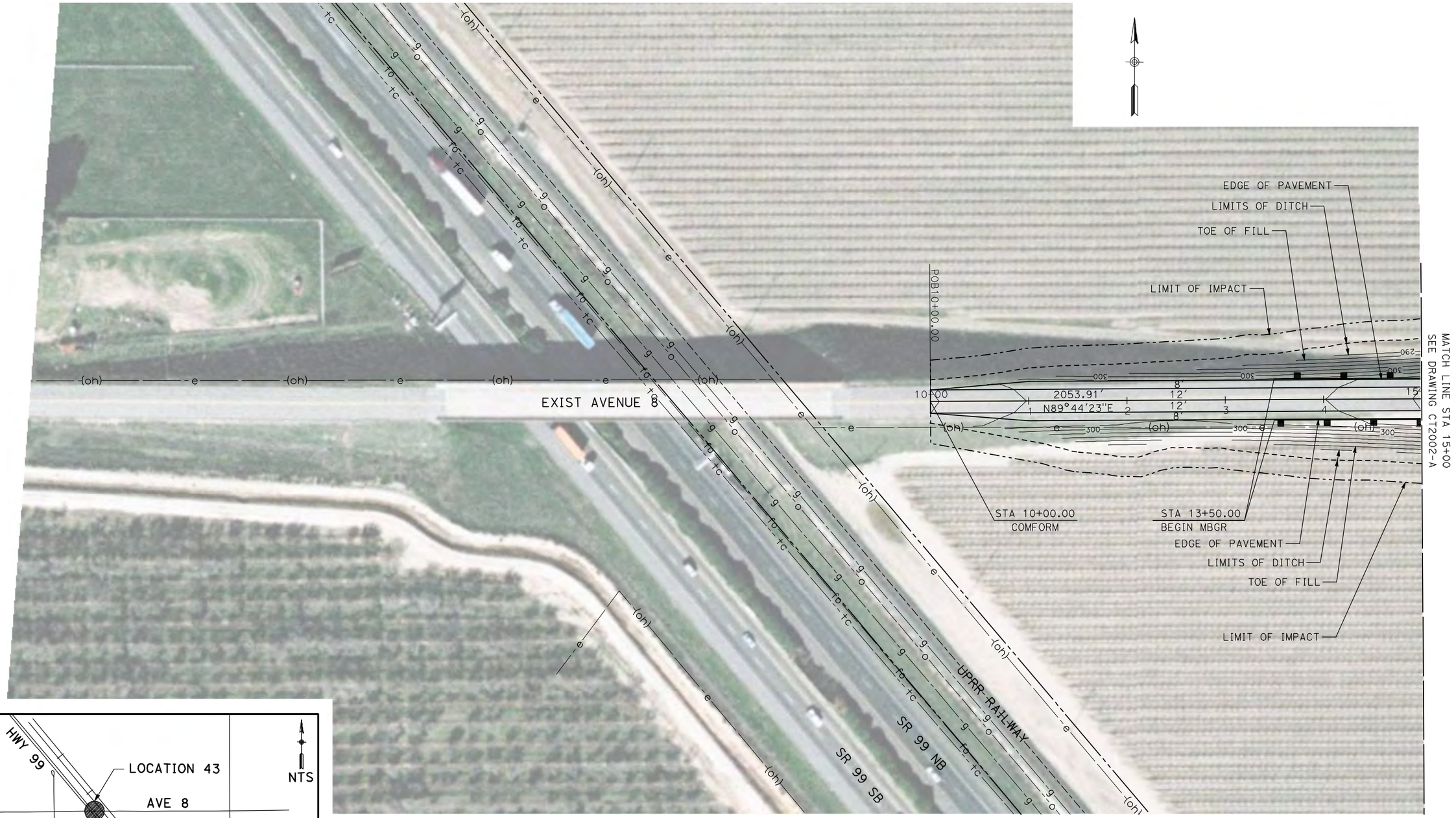
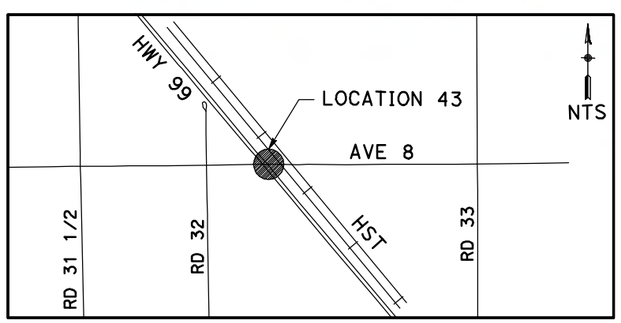




NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT3001-A THROUGH CT3003-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

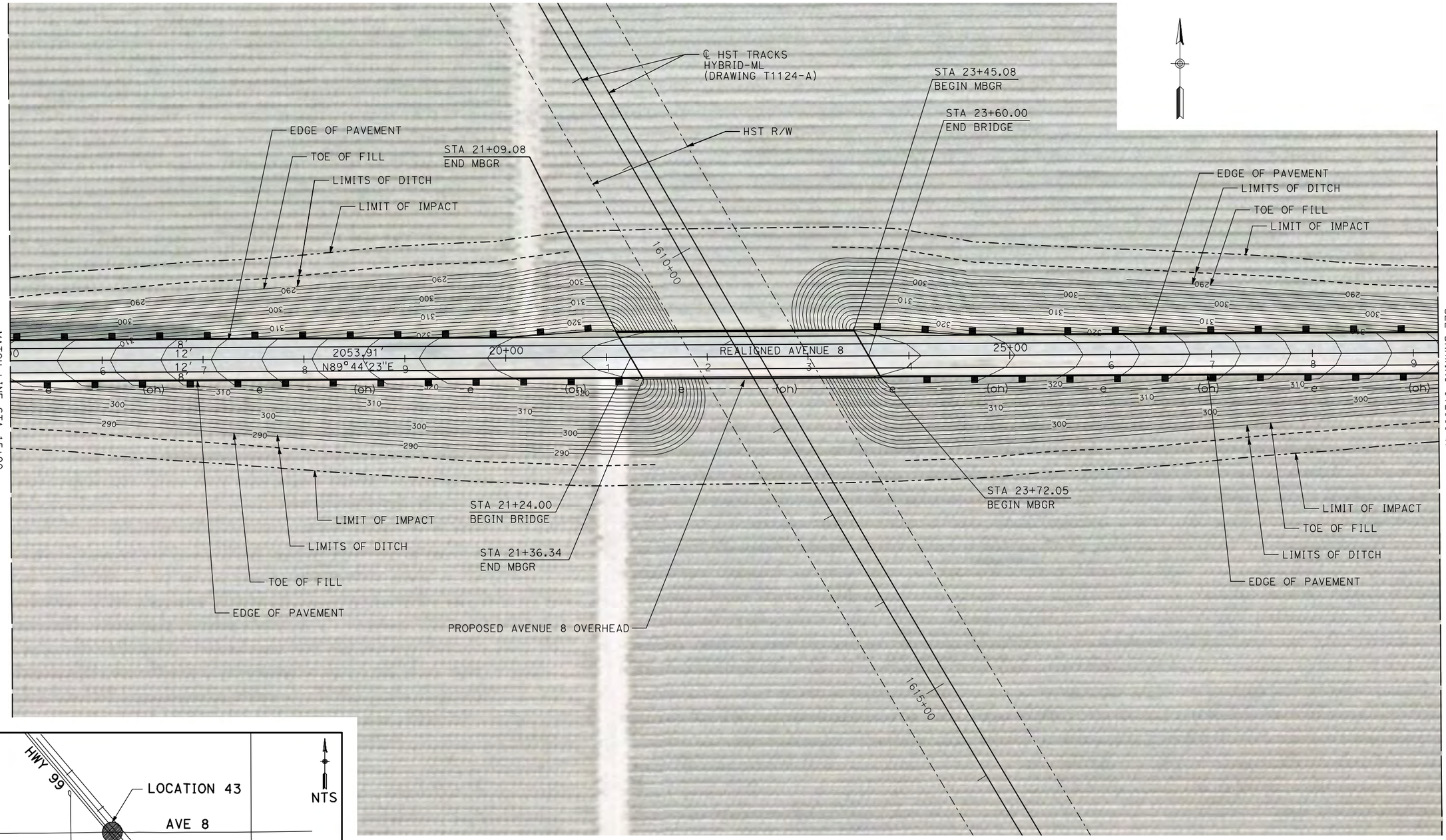
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

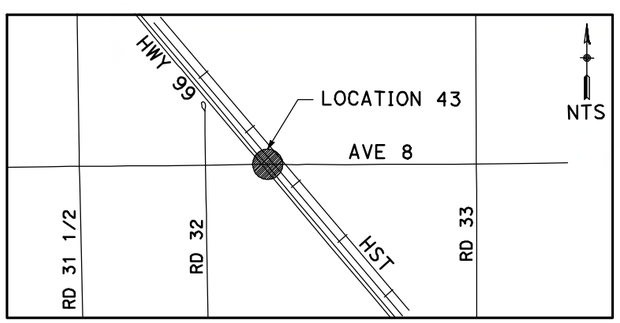
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAINLINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 8
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT2001-A
SCALE AS SHOWN
SHEET NO. OF ###

i:\chsr\60029962\task-02_merced-fresno\cadd\civil\sheet\roadway\hybrid-ave21\Volume 2 - Ave21Hybrid Caltrans Facilities\Layout\MF-CT-2001-A.dgn 6/28/2011 4:36:18 PM GibsonR1





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT3001-A THROUGH CT3003-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

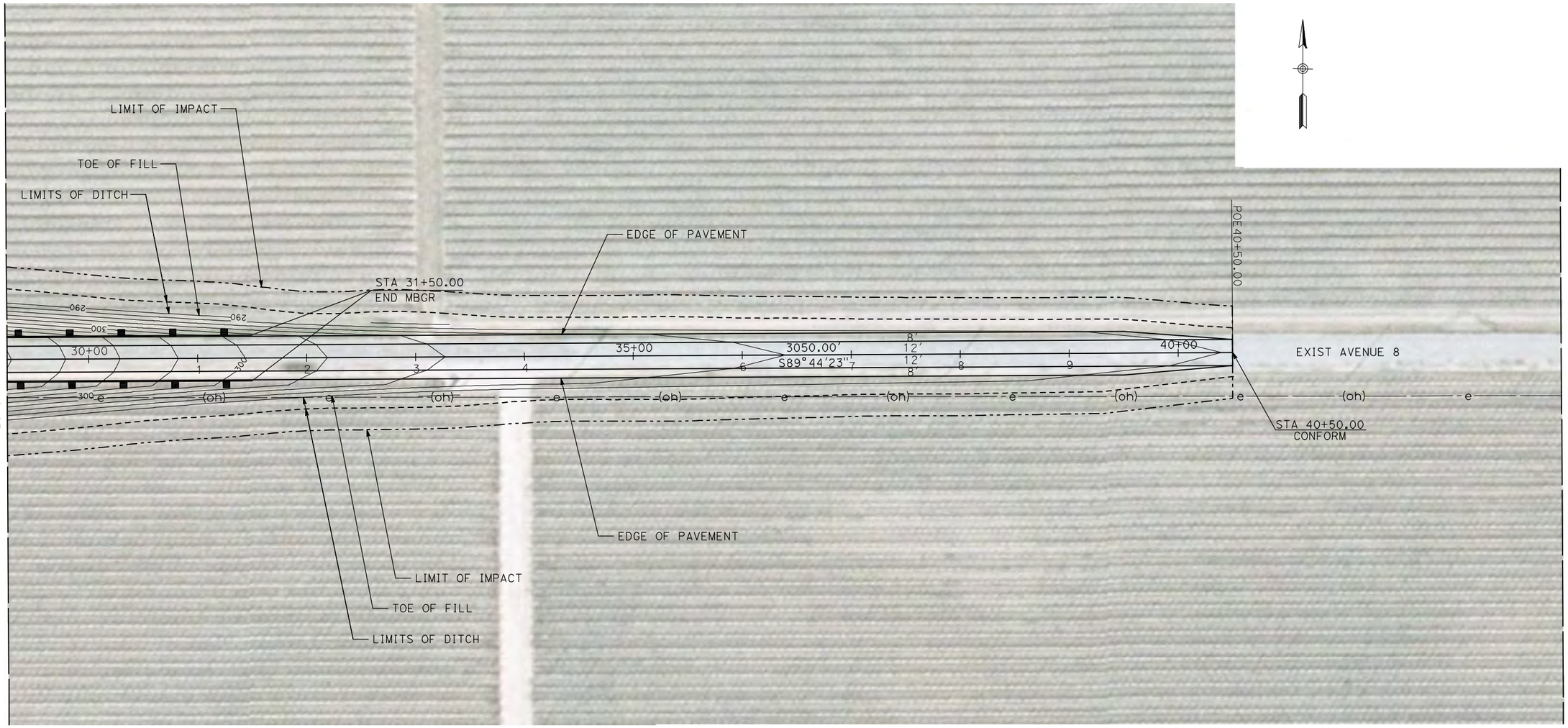
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

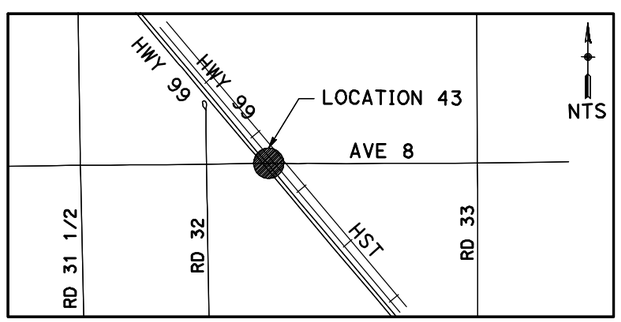
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAINLINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 8
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT2002-A
SCALE AS SHOWN
SHEET NO. OF ###

GibsonR1 6/28/2011 4:36:25 PM i:\chsr\60022962\task-02_merced-fresno\cadd\civil\sheet\roadway\hybrid-ave21\Volume 2 - Ave21Hybrid Caltrans Facilities\Layout\MF-CT-2002-A.dgn





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT3001-A THROUGH CT3003-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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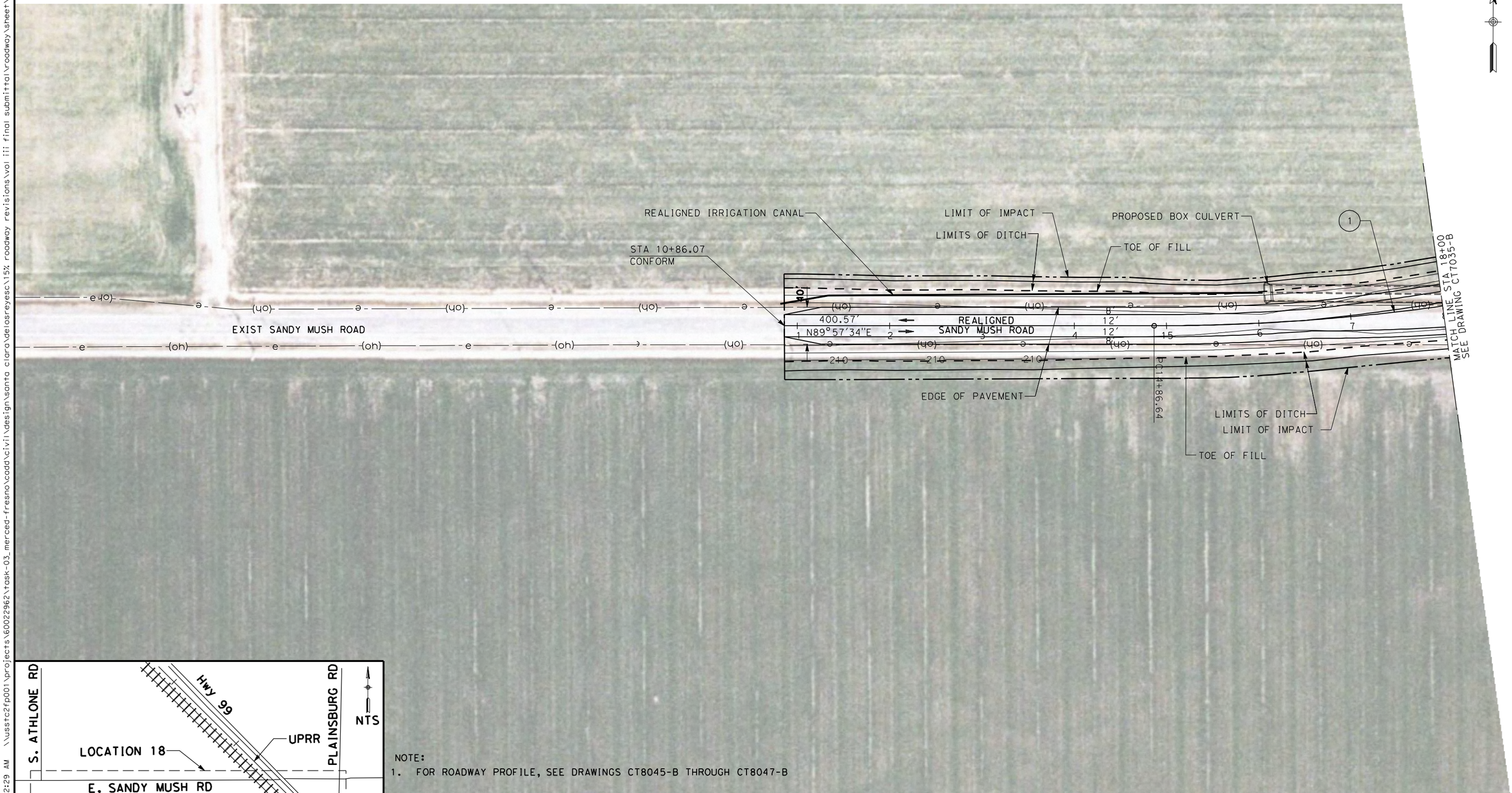
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

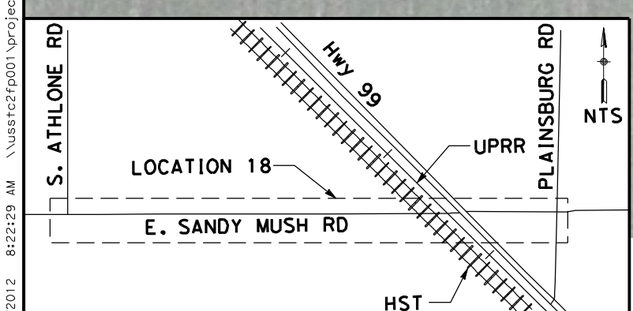
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 8
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT2003-A
SCALE AS SHOWN
SHEET NO. ### OF ###

6/28/2011 4:36:34 PM I:\cher\60022962\task-02_merced-fresno\cadd\civil\sheet\roadway\hybrid-ave21\Volume 2 - Ave21Hybrid Caltrans Facilites\Layout\MF-CT-2003-A.dgn
GibsonR1





NOTE:
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8045-B THROUGH CT8047-B

CURVE DATA

No.	R	Δ	T	L	V
1	2300.00	39°51'34"	833.94	1600.06	50 MPH

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT7034-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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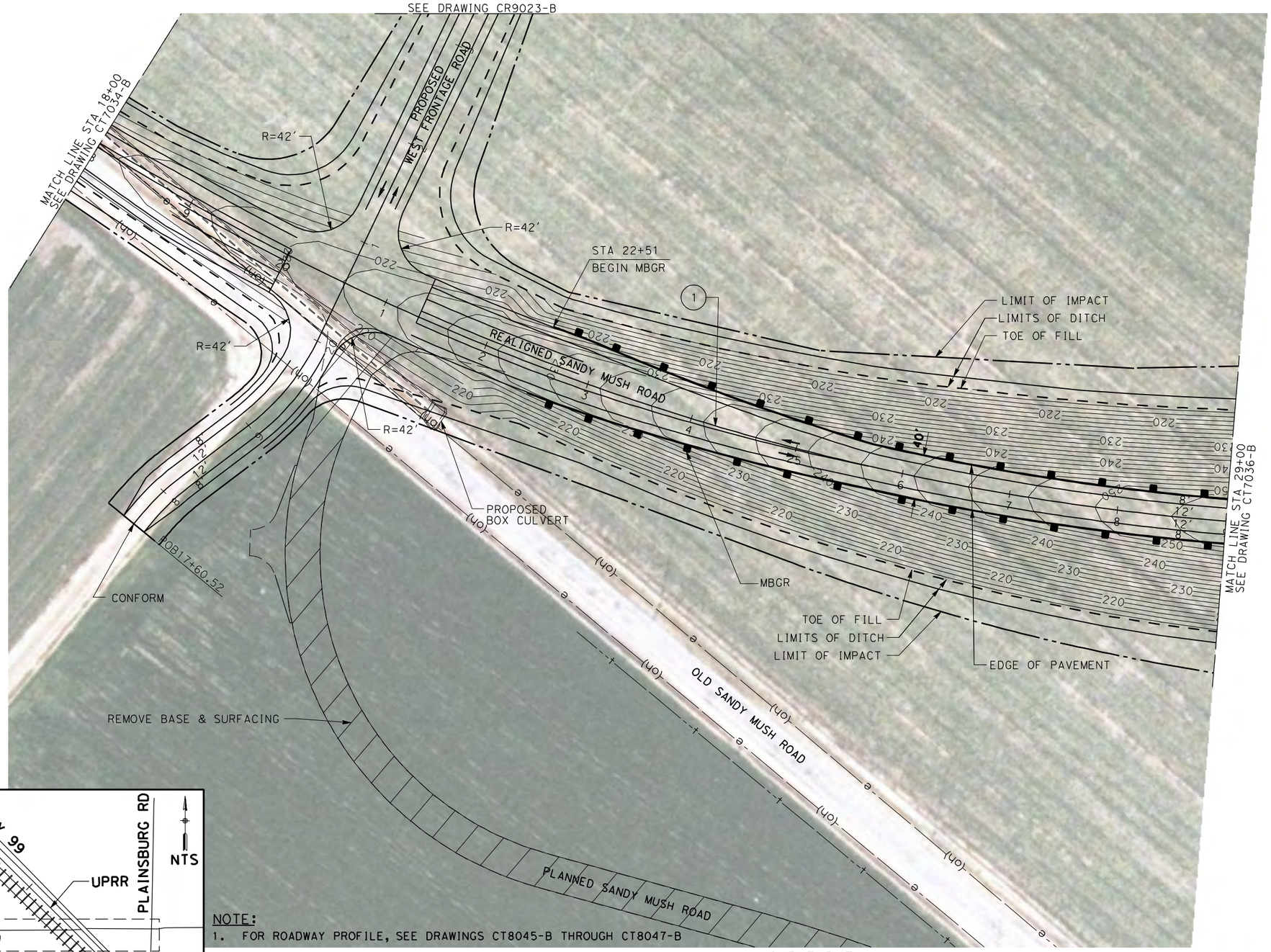

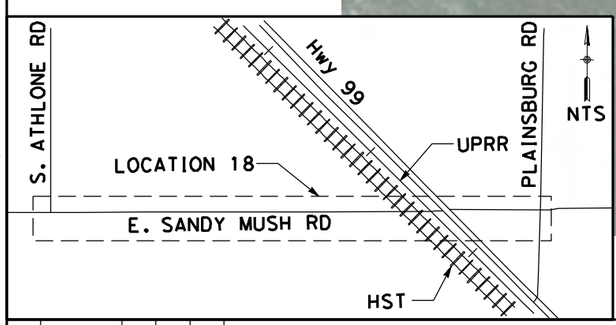

NOTE:
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8045-B THROUGH CT8047-B

CURVE DATA

No.	R	Δ	T	L	V
1	2300.00	39°51'34"	833.94	1600.06	50 MPH

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT7035-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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layeled

SEE DRAWING CR9023-B

℄ HST TRACKS
A2-21MC
(SEE DRAWING T2216-A)

HST R/W

UPRR R/W

LIMIT OF IMPACT

SEE CONTRACT NO. 10-415804

FUTURE CALTRANS FACILITY, BY OTHERS

TOE OF FILL

STA 30+77.89
END MBGR

MBGR

PROPOSED WEST FRONTAGE ROAD

FRONTAGE ROAD (PER CONTRACT 10-415804
FUTURE CALTRANS FACILITY, BY OTHERS)

UPRR

SR99 SB OFF-RAMP

STA 37+57.46
END MBGR

STA 35+97.43
BEGIN MBGR

STA 38+61.98
BEGIN MBGR

STA 41+05
END MBGR

8'24'

LIMIT OF IMPACT

TOE OF FILL

SR99 SB PER CONTRACT 10-415804
(FUTURE CALTRANS FACILITY, BY OTHERS)

SR99 NB PER CONTRACT 10-415804
(FUTURE CALTRANS FACILITY, BY OTHERS)

MATCH LINE
SEE DRAWING
CT7035-B

LINE STA 29+00

1099.27'
N50°6'0"E

42.83'

REALIGNED, SANDY MUSH ROAD

EDGE OF PAVEMENT

MBGR

STA 30+77.89
BEGIN BRIDGE

TOE OF FILL

LIMITS OF DITCH

LIMIT OF IMPACT

STA 35+97.43
END BRIDGE

PROPOSED
SANDY MUSH OVERHEAD

LIMIT OF IMPACT

SR99 SB ON-RAMP

CONFORM
"SANDY MUSH" 47+19.91
PER CONTRACT No. 10-415804
"B" 41+85.98
ELEV 241.87

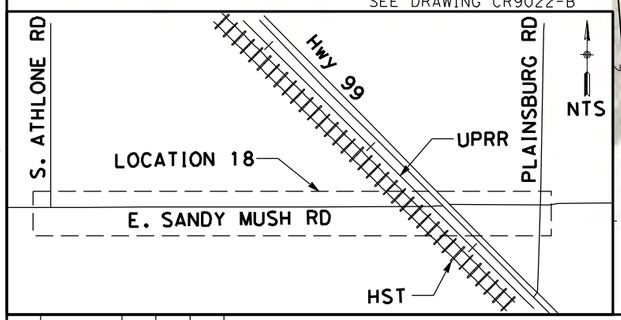
LIMIT OF IMPACT

TOE OF FILL

SEE CONTRACT NO. 10-415804

FUTURE CALTRANS FACILITY, BY OTHERS

SEE DRAWING CR9022-B



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8045-B THROUGH CT8047-B

CURVE DATA

No.	R	Δ	T	L	V
1	2300.00	39°51'34"	833.94	1600.06	50 MPH

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

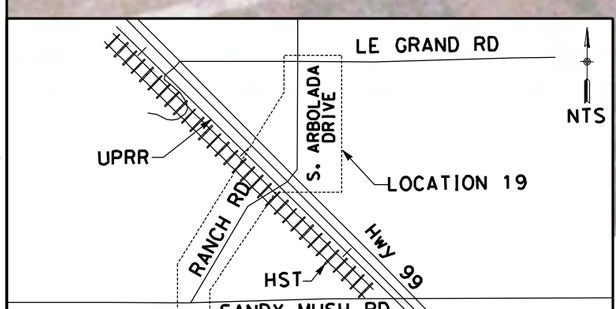
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT7036-B
SCALE AS SHOWN
SHEET NO. ### OF ###

6/27/2011 1:44:18 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 4 - ave 21 hybrid\Volume 2B - Ave 21 Hybrid Wye Caltrans Facilities\Layout\CT7036-B.dgn
ayelea



NOTE:
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8048-B THROUGH CT8052-B

CURVE DATA

No.	R	Δ	T	L
1	3000.00	14°17'14"	375.99	748.07

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
LAYOUT
SHEET 1 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7037-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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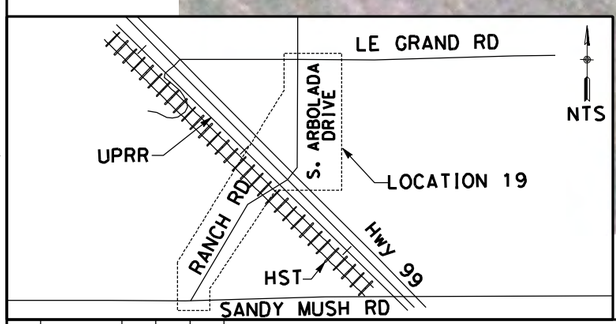

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8048-B THROUGH CT8052-B

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
LAYOUT
SHEET 2 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7038-B
SCALE AS SHOWN
SHEET NO. ### OF ###

6/27/2011 1:44:44 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 4 - ave 21 hybrid\Volume 2B - Ave 21 Hybrid Wye Caltrans Facilities\Layout\CT7038-B.dgn
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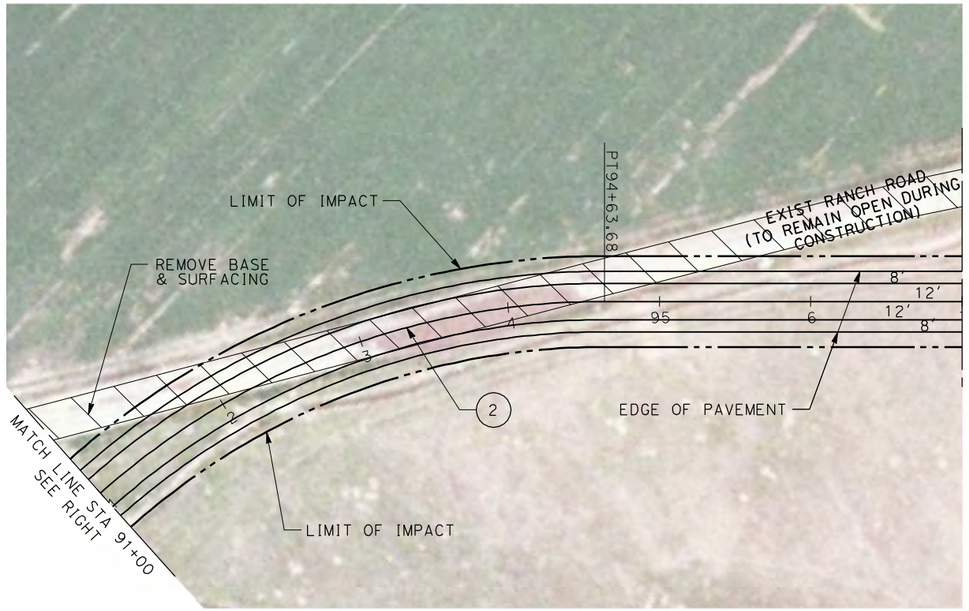

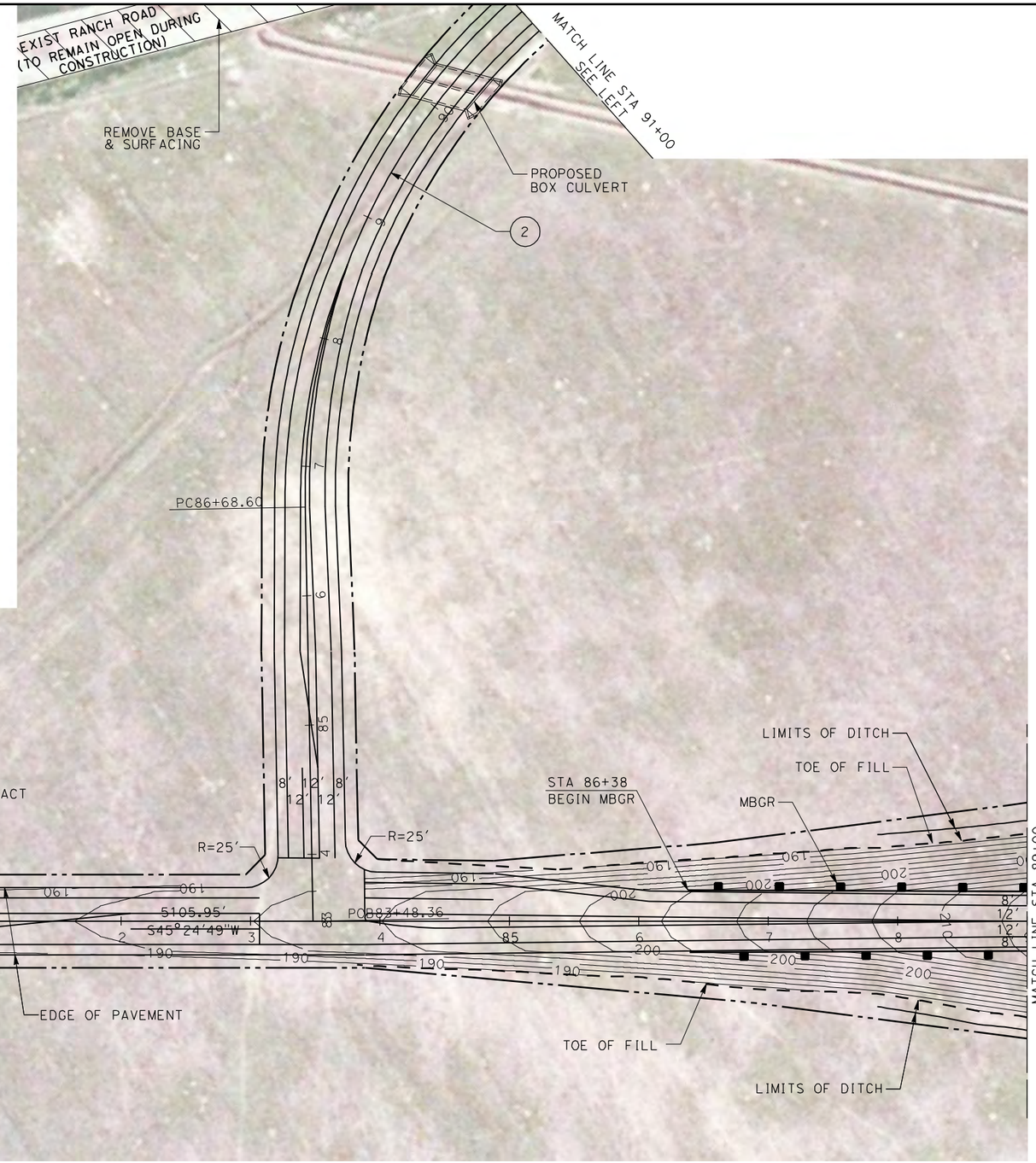

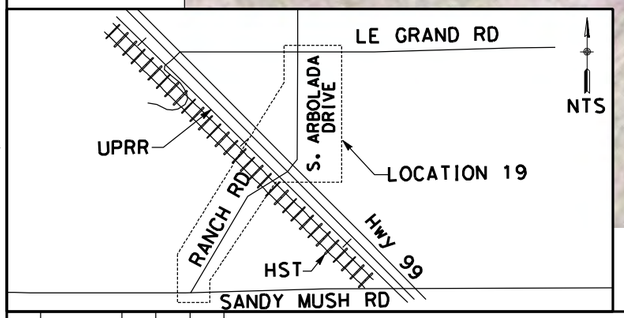

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8127-B THROUGH CT8131-B

CURVE DATA

No.	R	Δ	T	L
2	500.00	91°06'35"	509.78	795.08

50 0 50 100

1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. AYELE
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
LAYOUT
SHEET 3 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7039-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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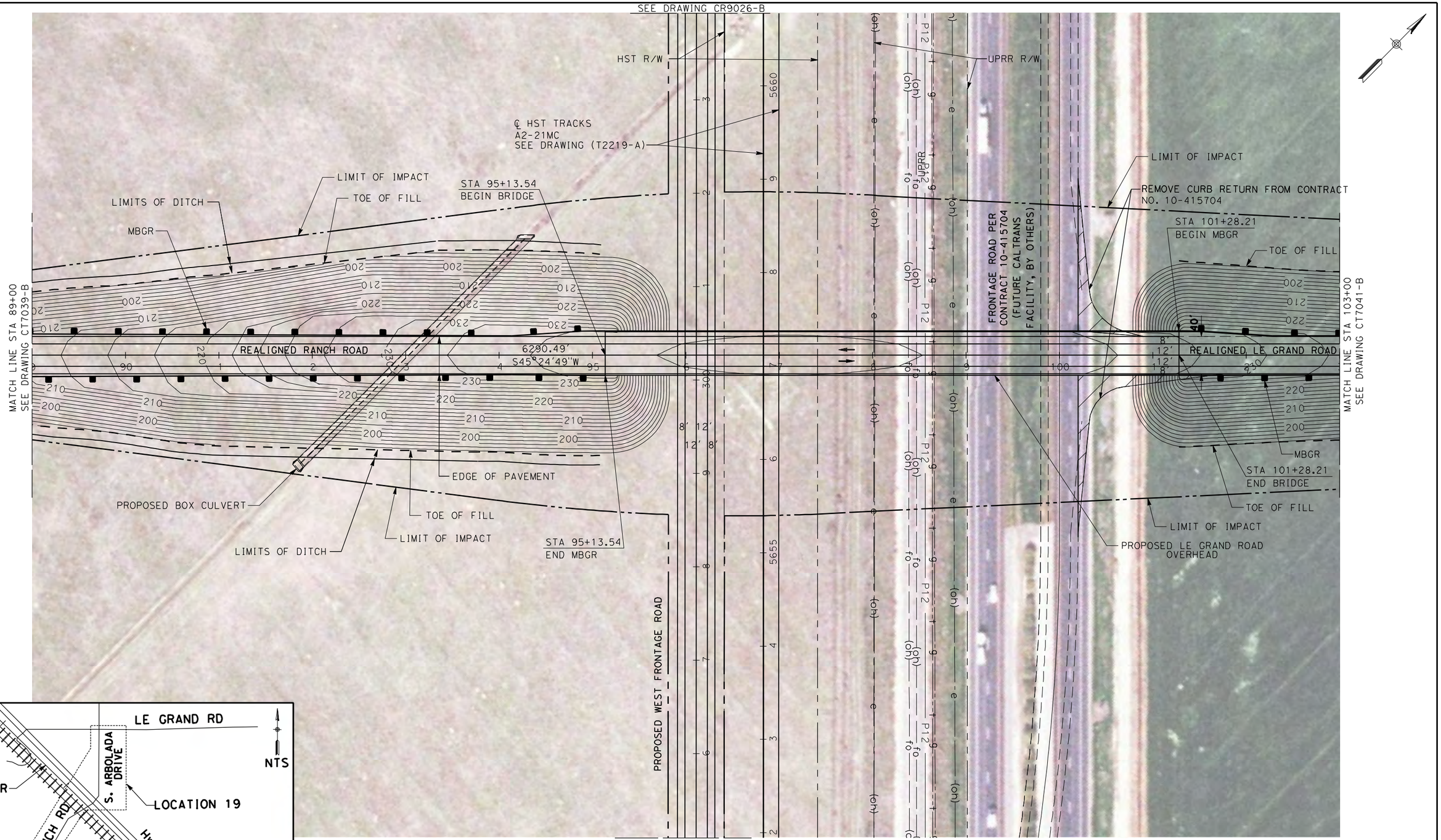

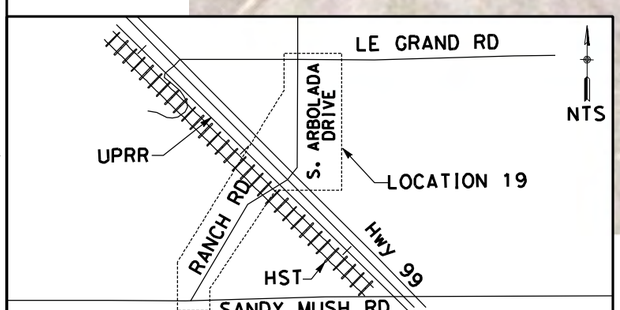

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8048-B THROUGH CT8052-B

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

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Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
LAYOUT
SHEET 4 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7040-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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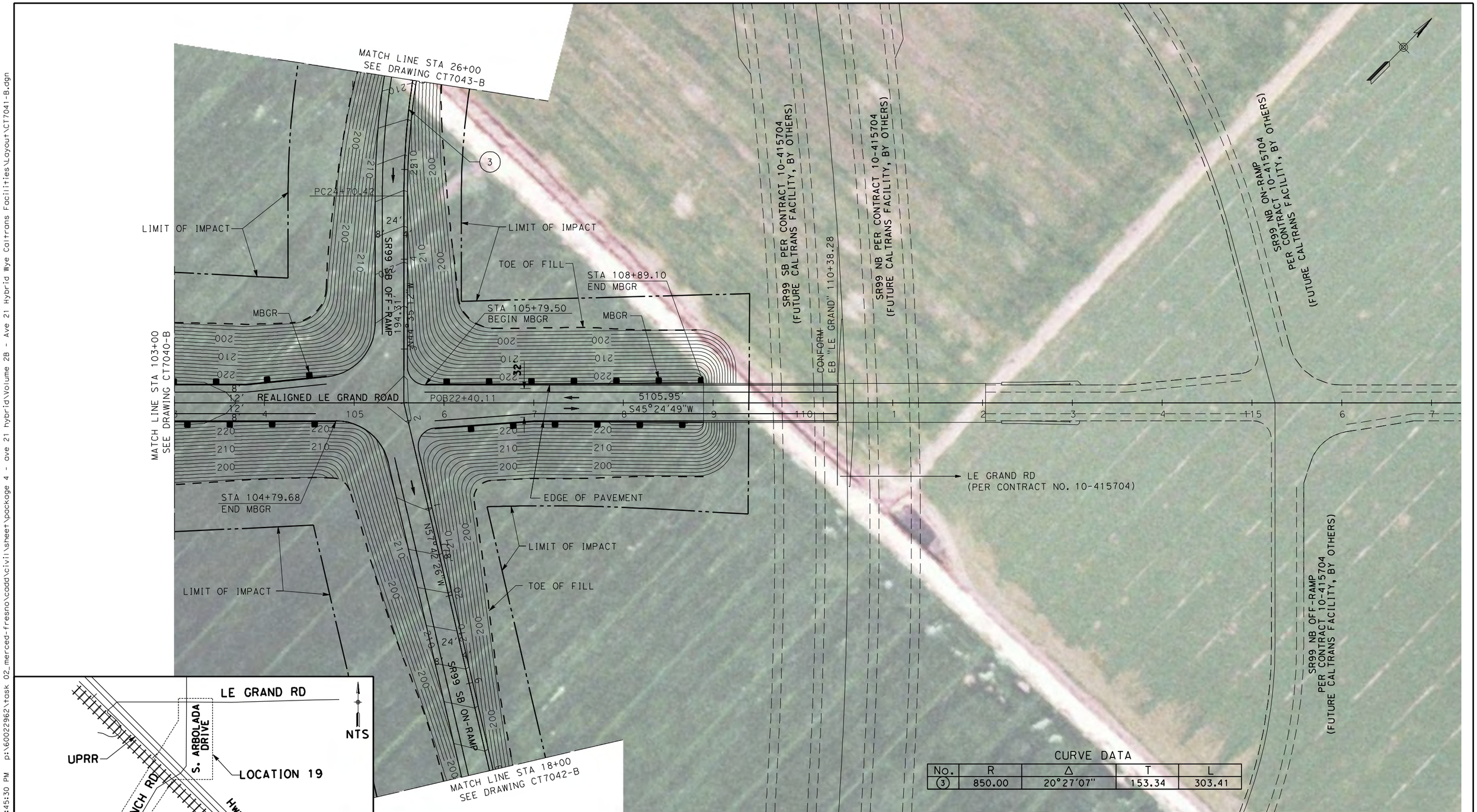
ayeled

6/27/2011 1:45:30 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet package 4 - ave 21 hybrid\Volume 2B - Ave 21 Hybrid Wye Caltrans Facilities\Layout\CT7041-B.dgn



CURVE DATA

No.	R	Δ	T	L
3	850.00	20°27'07"	153.34	303.41

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8053-B THROUGH CT8056-B

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

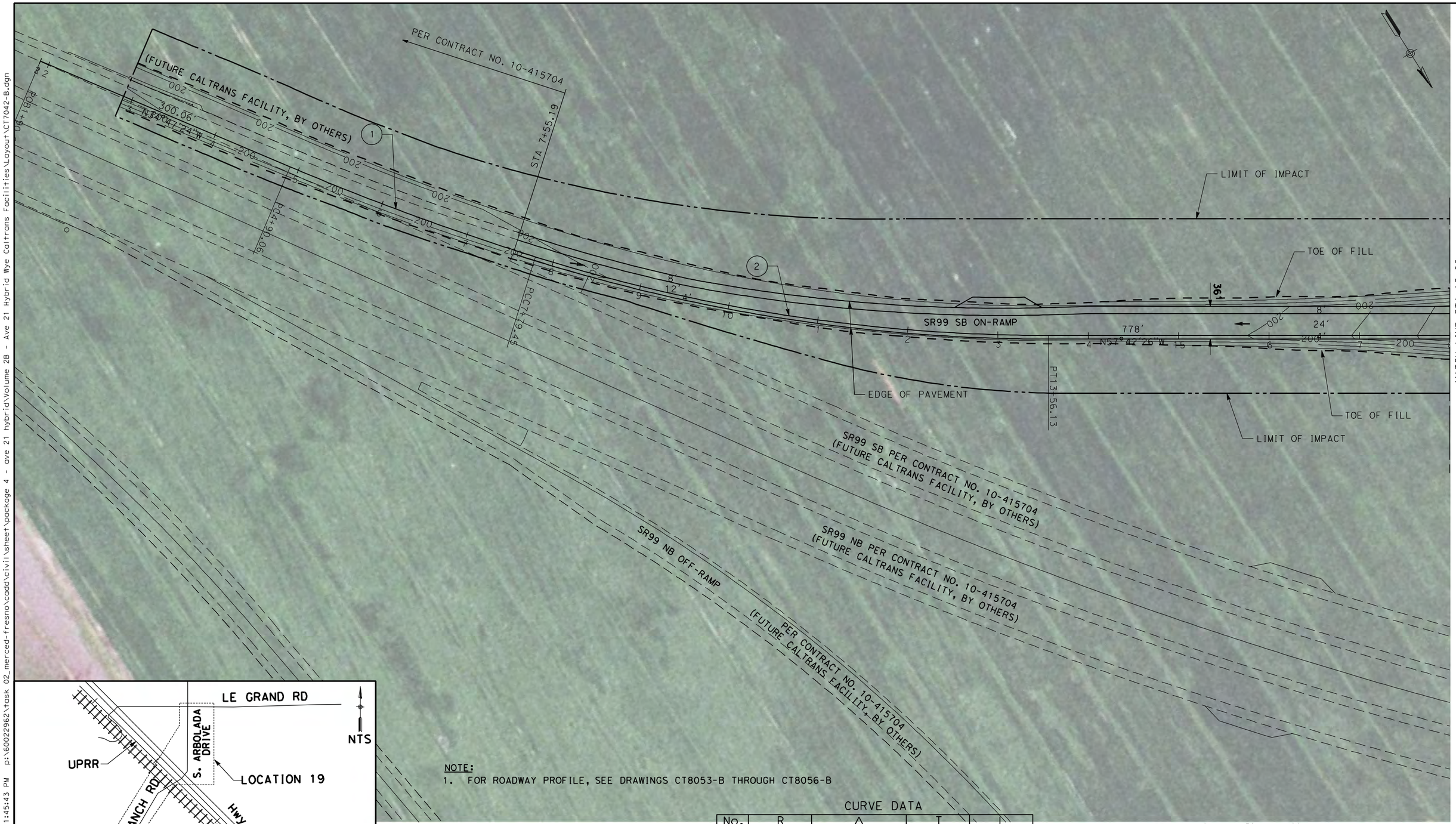
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
LAYOUT
SHEET 5 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT7041-B
SCALE AS SHOWN
SHEET NO. ### OF ###

ayelled



NOTE:
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8053-B THROUGH CT8056-B

CURVE DATA

No.	R	Δ	T	L
1	3000.00	5°31'37"	144.81	289.39
2	850.00	17°23'25"	290.57	576.68

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP
LAYOUT
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CT7042-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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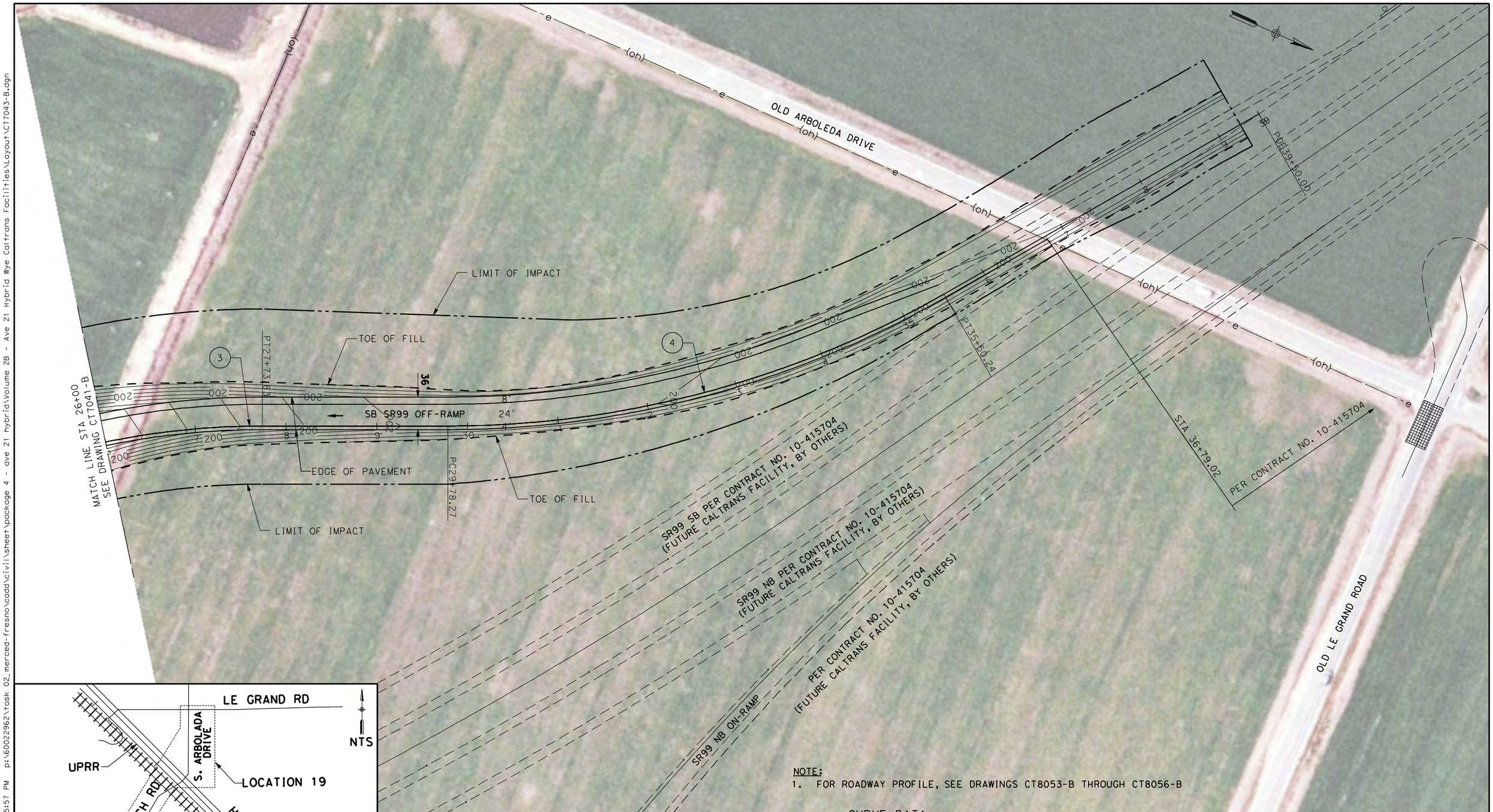

NOTE:
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT8053-B THROUGH CT8056-B

CURVE DATA

No.	R	Δ	T	L
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4	1100.00	29°47'31"	292.61	571.97

50 0 50 100
1" = 50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP
LAYOUT
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CT7043-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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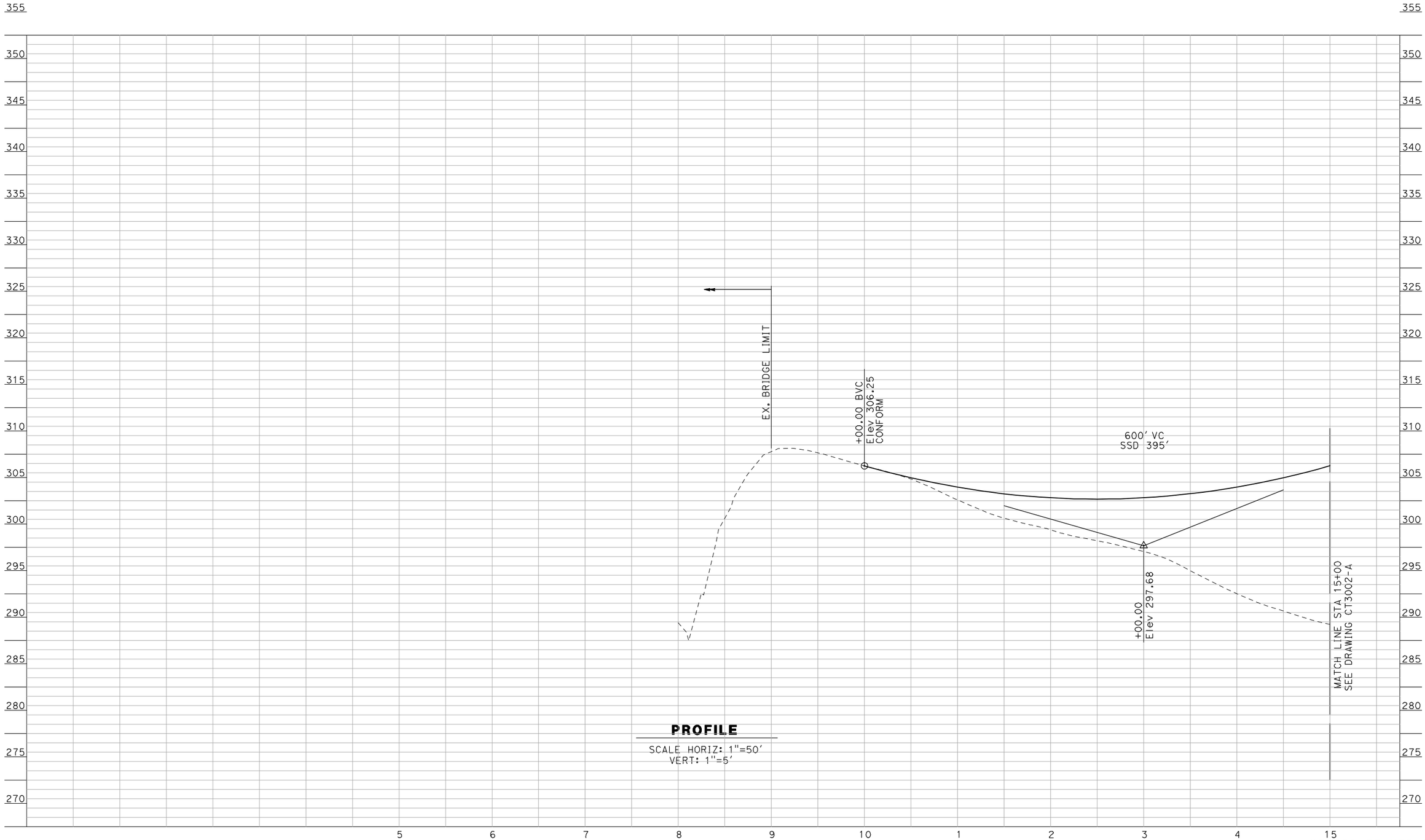

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAINLINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 8
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT3001-A
SCALE AS SHOWN
SHEET NO. OF ###

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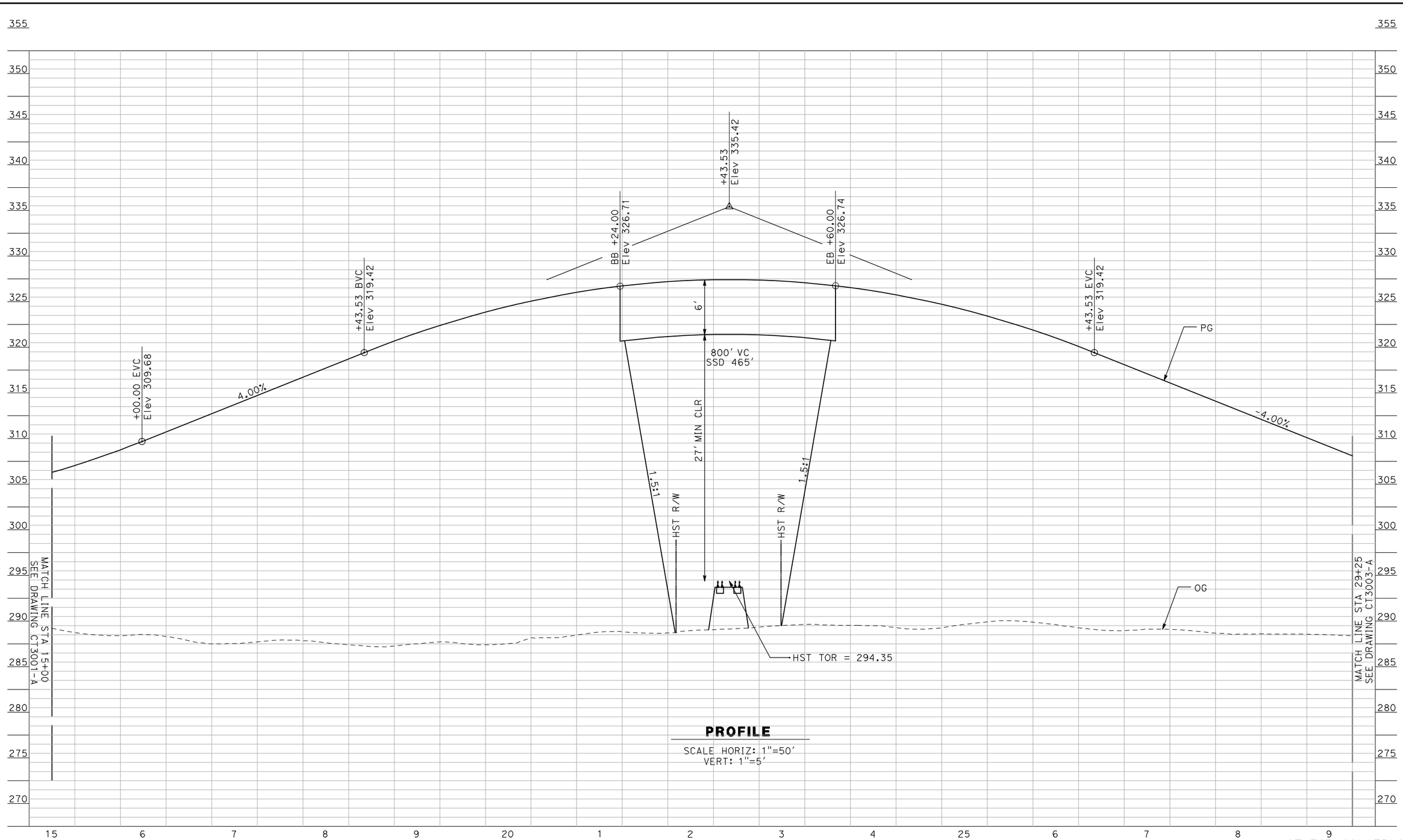

PROFILE

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAINLINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 8
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT3002-A
SCALE AS SHOWN
SHEET NO. OF ###

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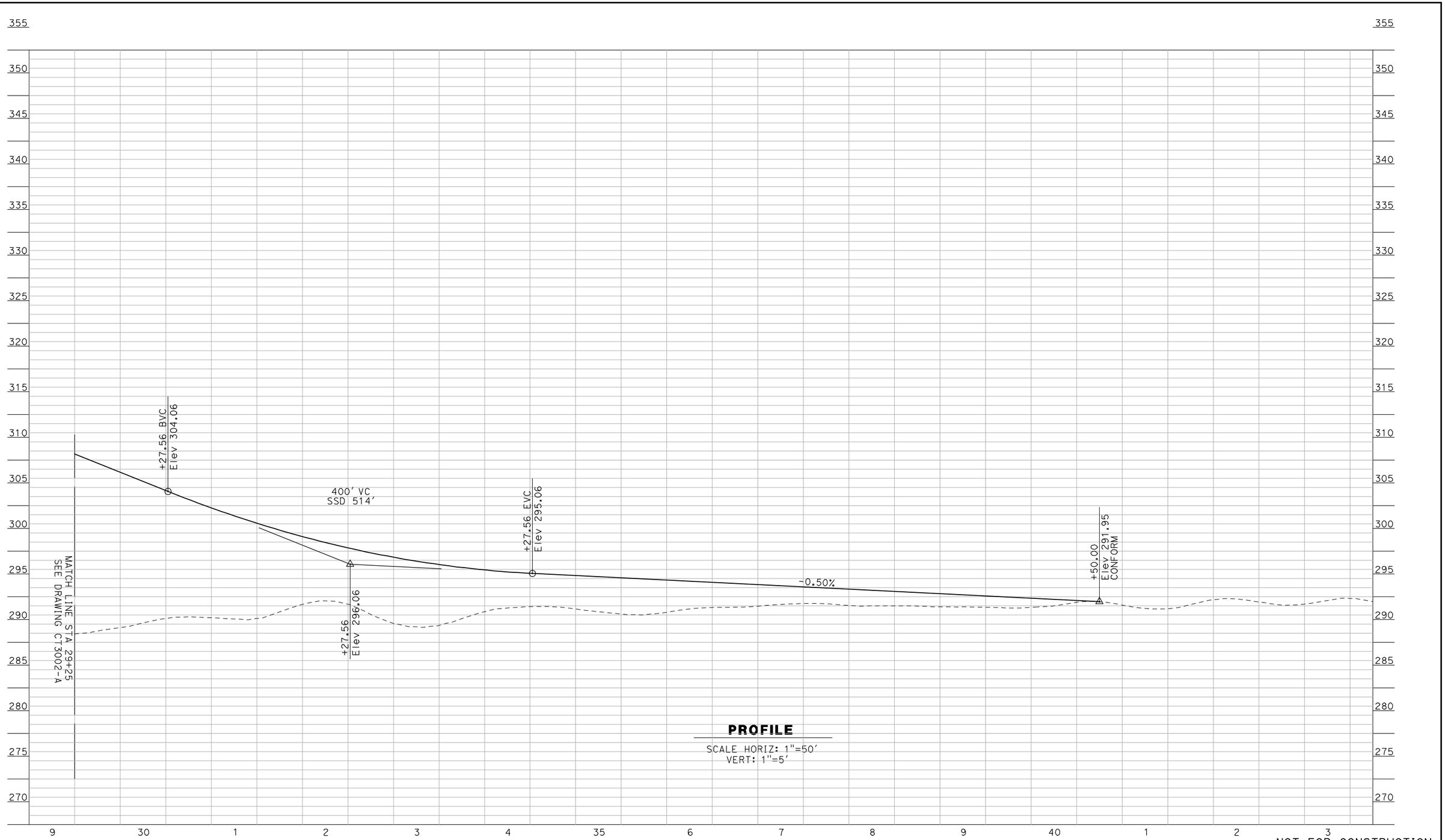

PROFILE

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MERCED TO FRESNO
BNSF MAINLINE - (AVE 21 HYBRID)
GRADE SEPARATION - AVENUE 8
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT3003-A
SCALE AS SHOWN
SHEET NO. OF ###

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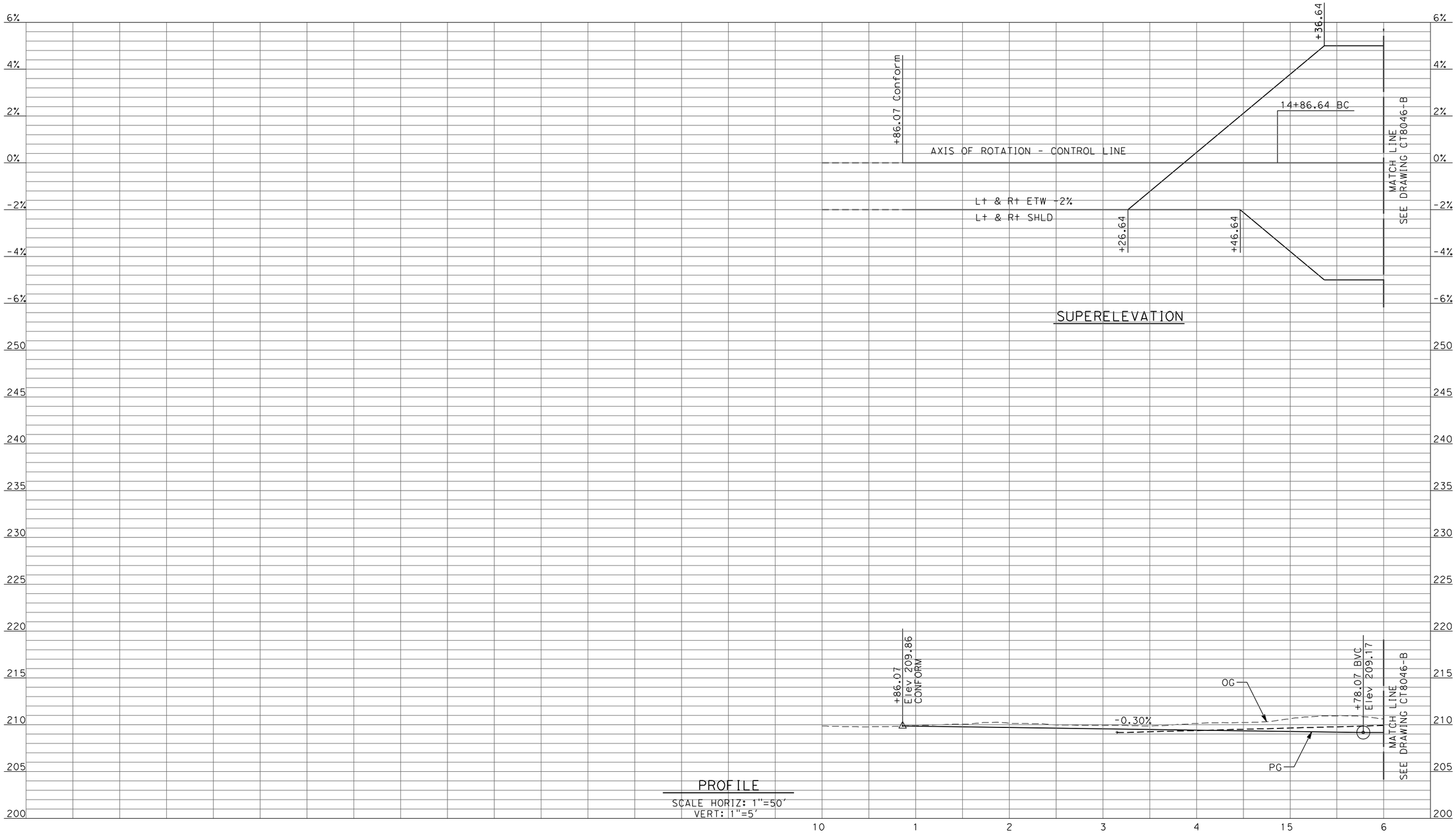

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IN CHARGE A. BOONE
DATE 06/30/2011

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT8045-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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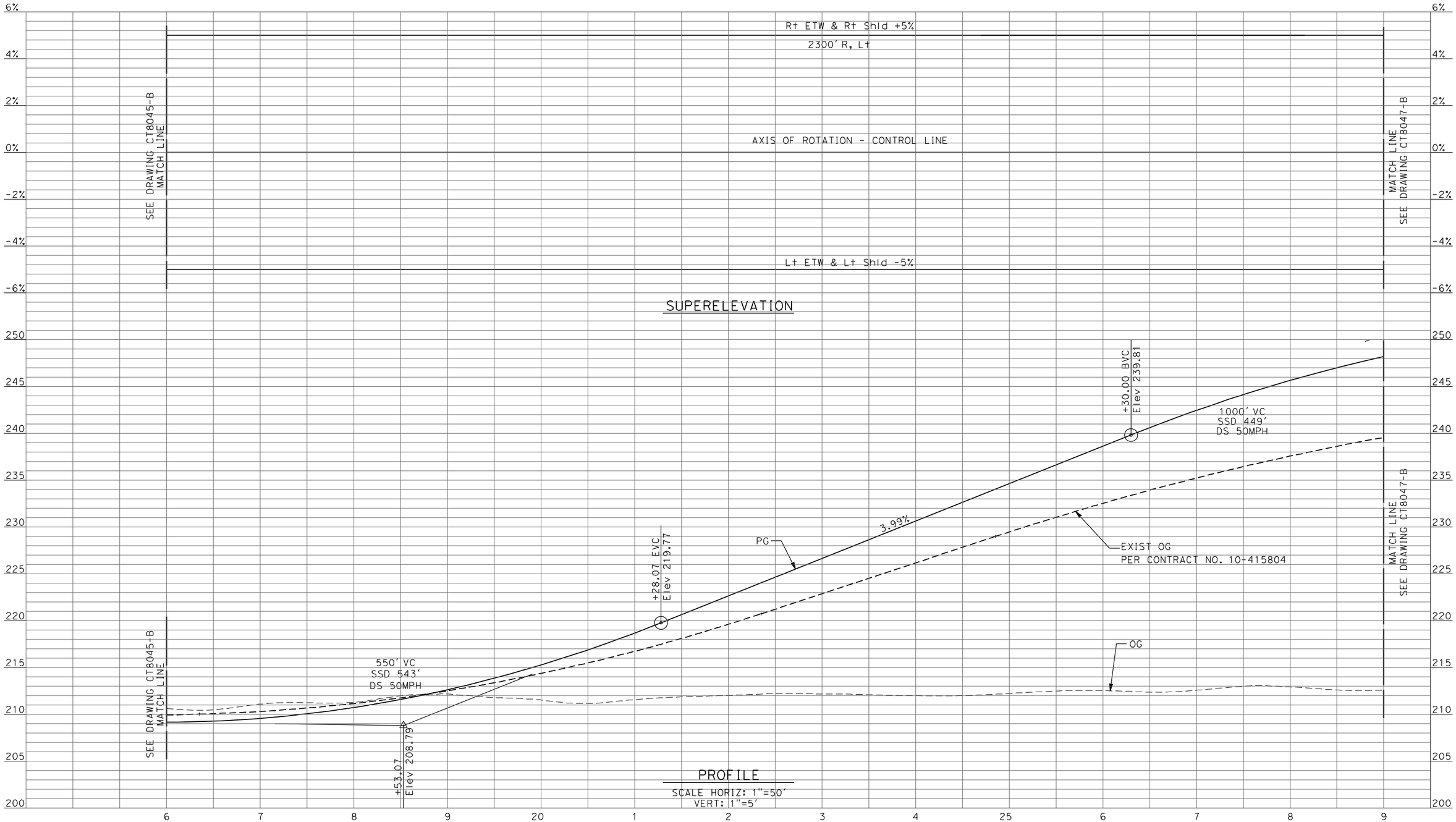

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT8046-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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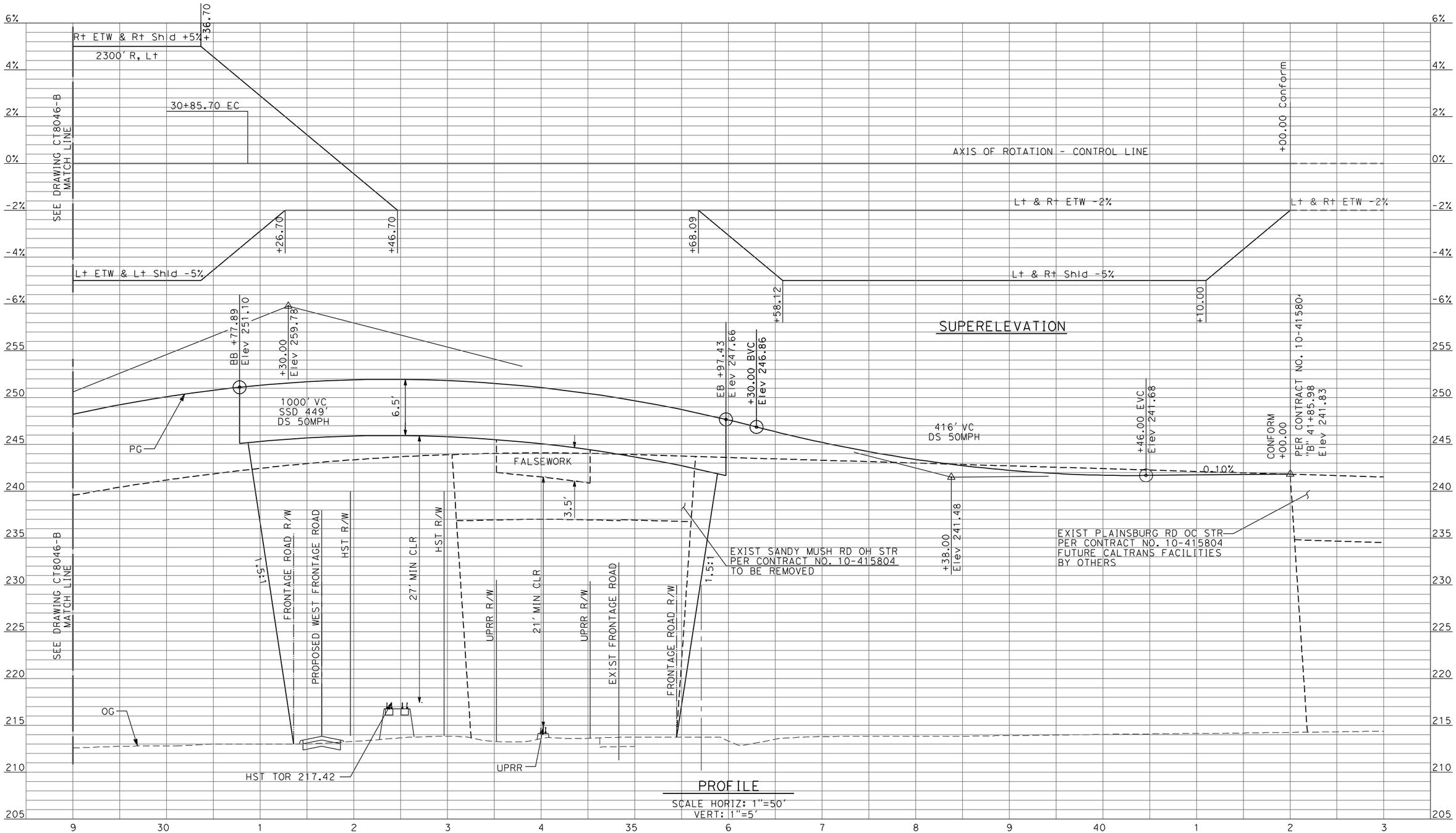

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - SANDY MUSH RD INTERCHANGE
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT8047-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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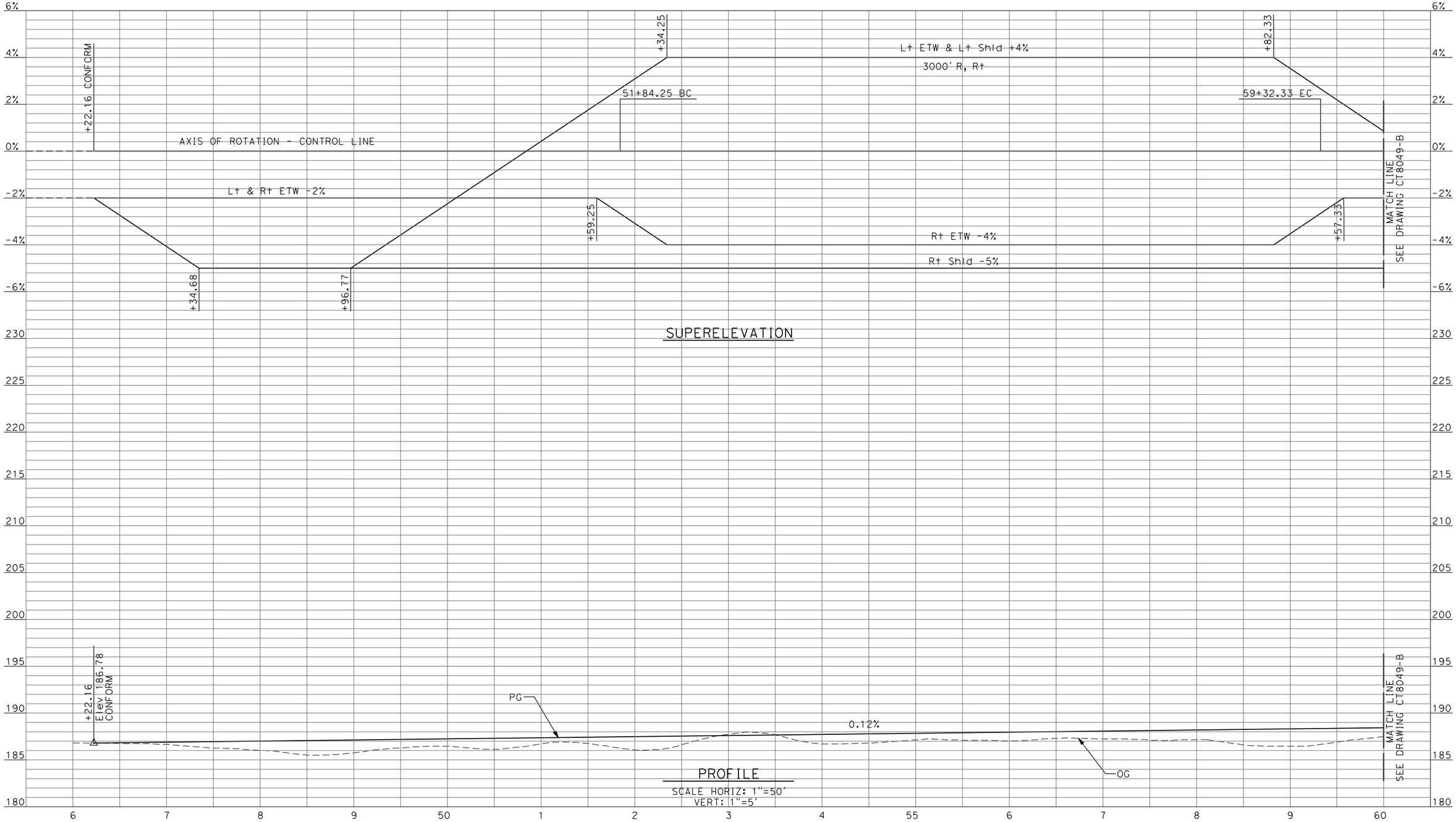

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
PROFILE
SHEET 1 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8048-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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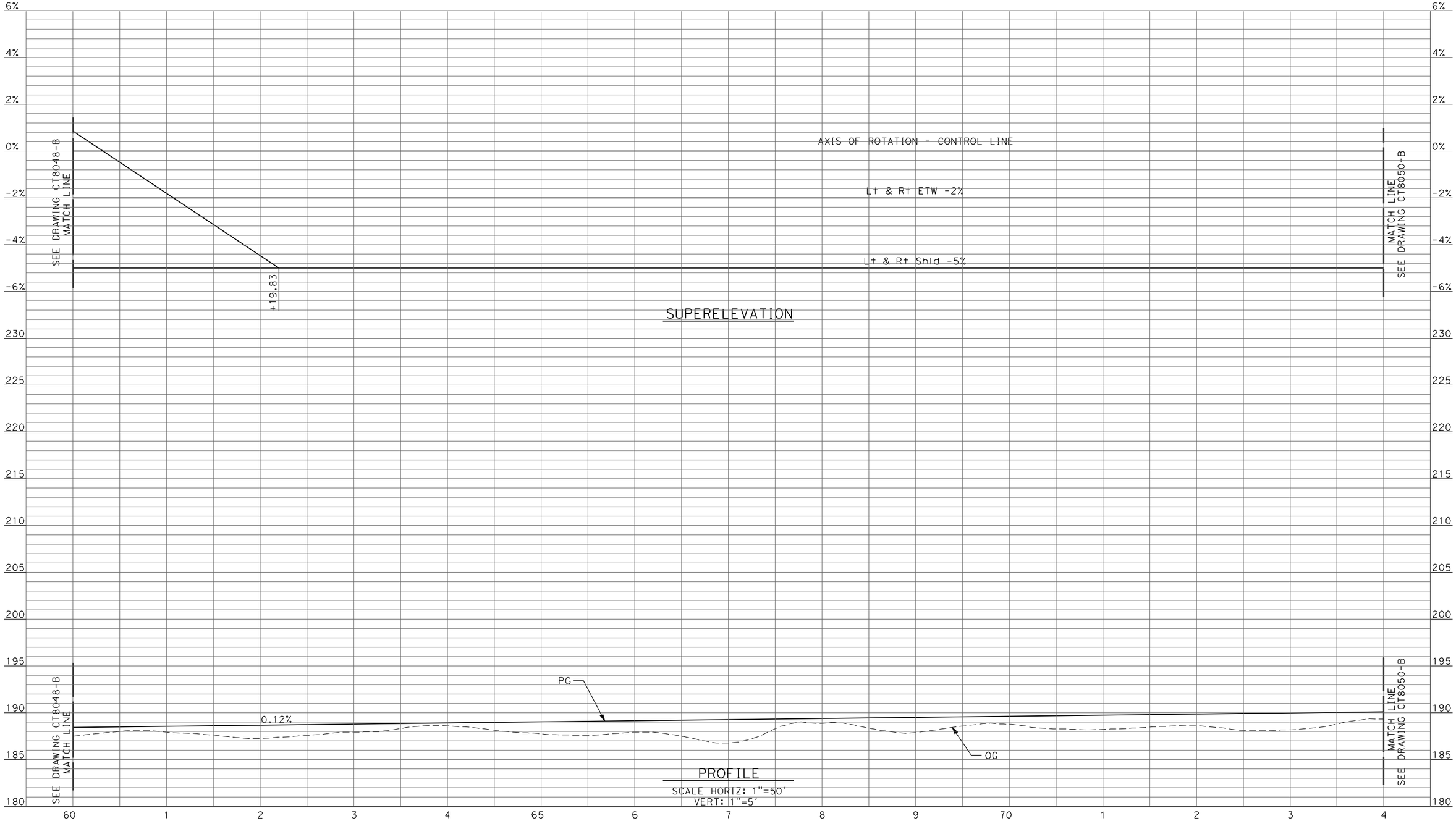

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
PROFILE
SHEET 2 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8049-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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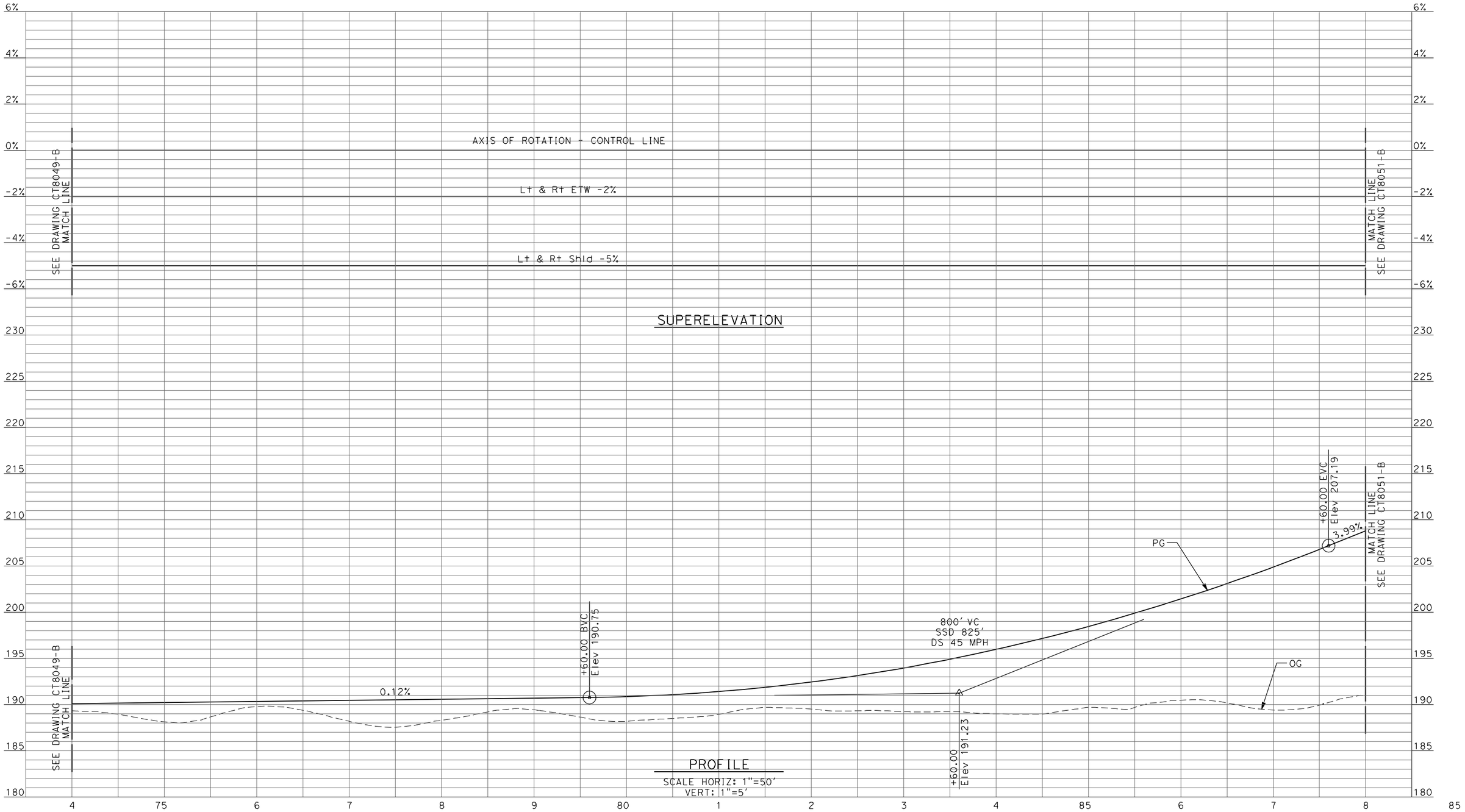

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DATE 06/30/2011

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
PROFILE
SHEET 3 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8050-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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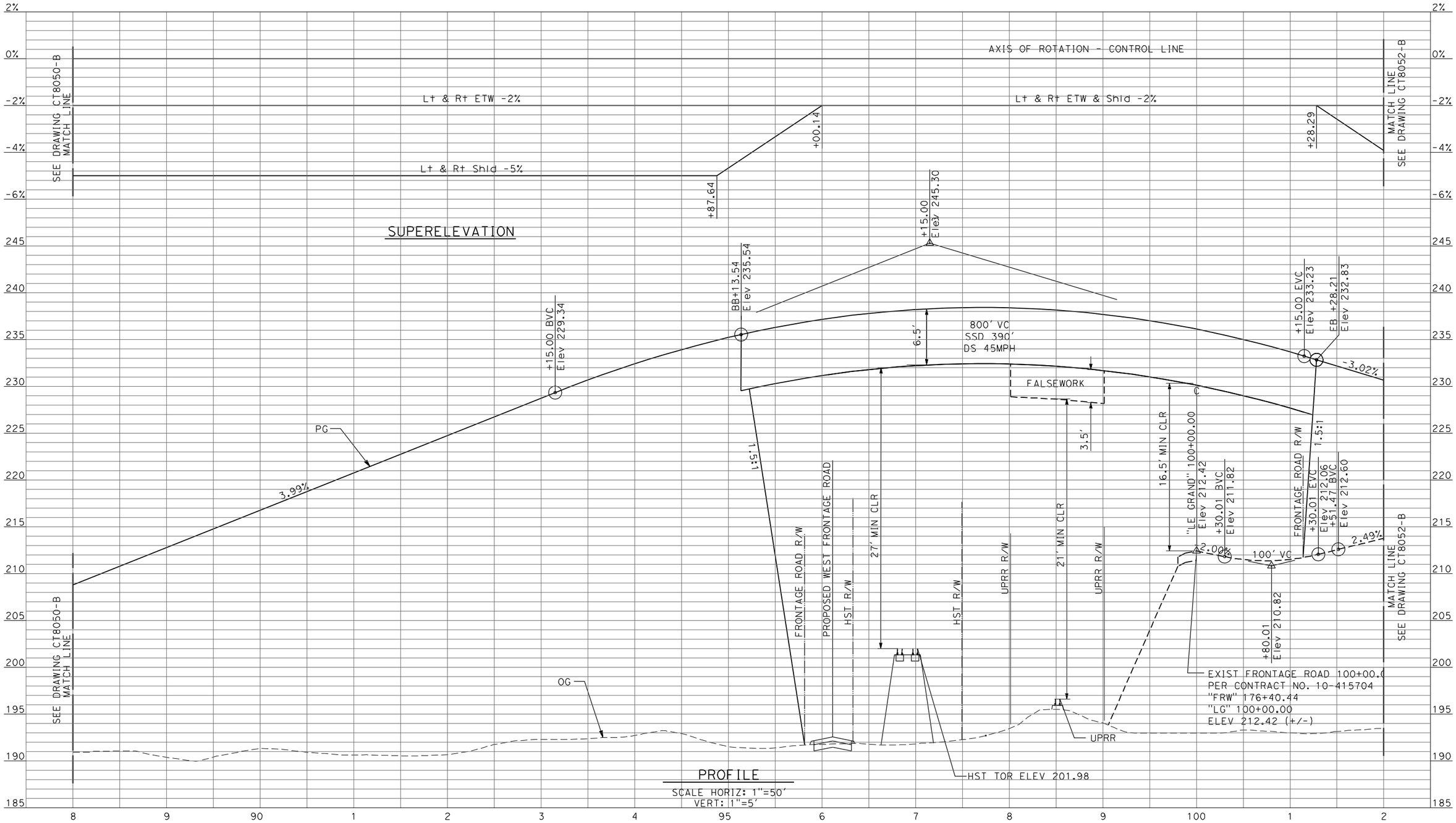

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET 15% DESIGN SUBMITTAL

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
PROFILE
SHEET 4 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8051-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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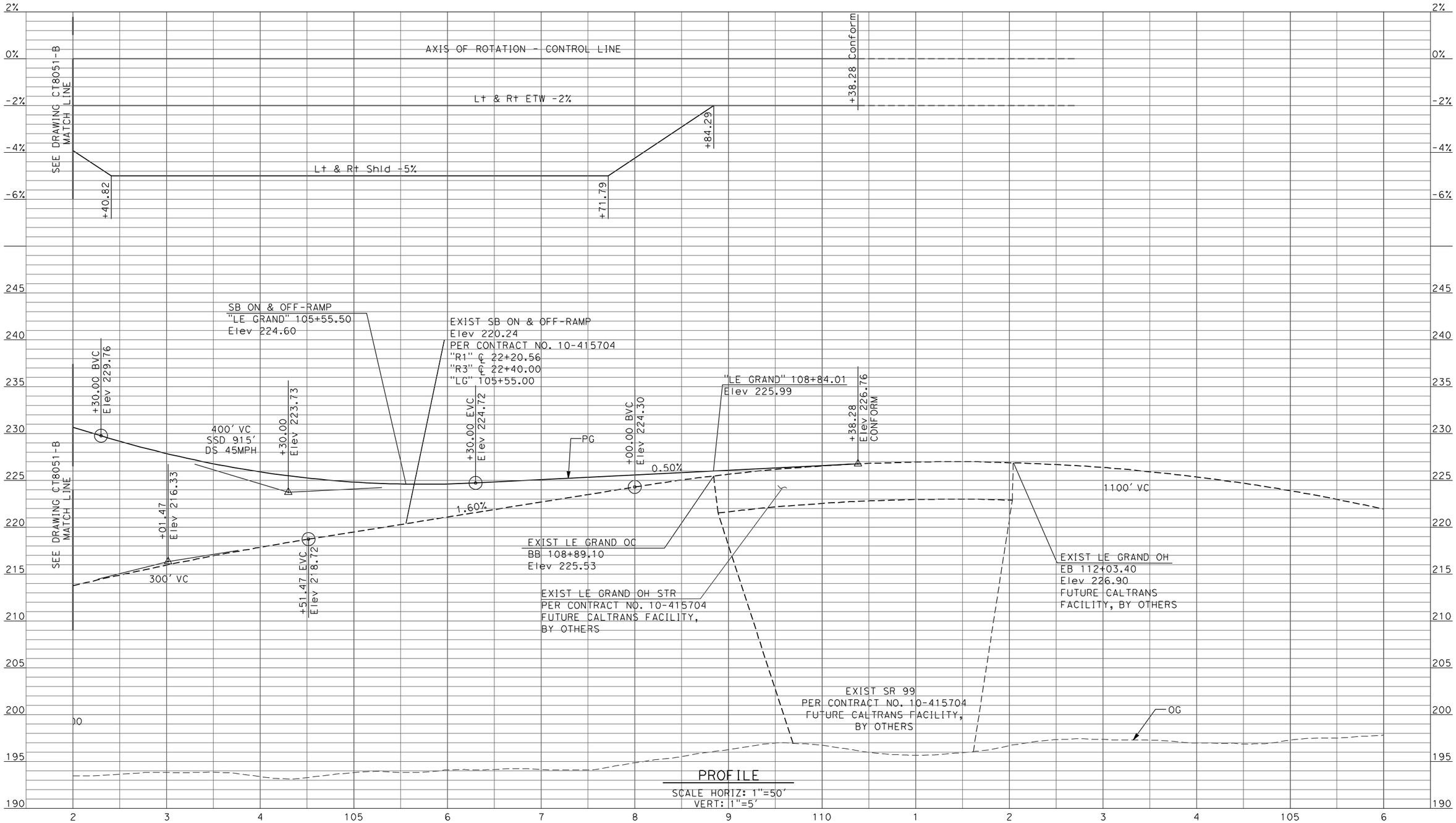

PROFILE

SCALE HORIZ: 1"=50'
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REV	DATE	BY	CHK	APP	DESCRIPTION

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION - LE GRAND RD INTERCHANGE
PROFILE
SHEET 5 OF 5

CONTRACT NO. HSR06-007
DRAWING NO. CT8052-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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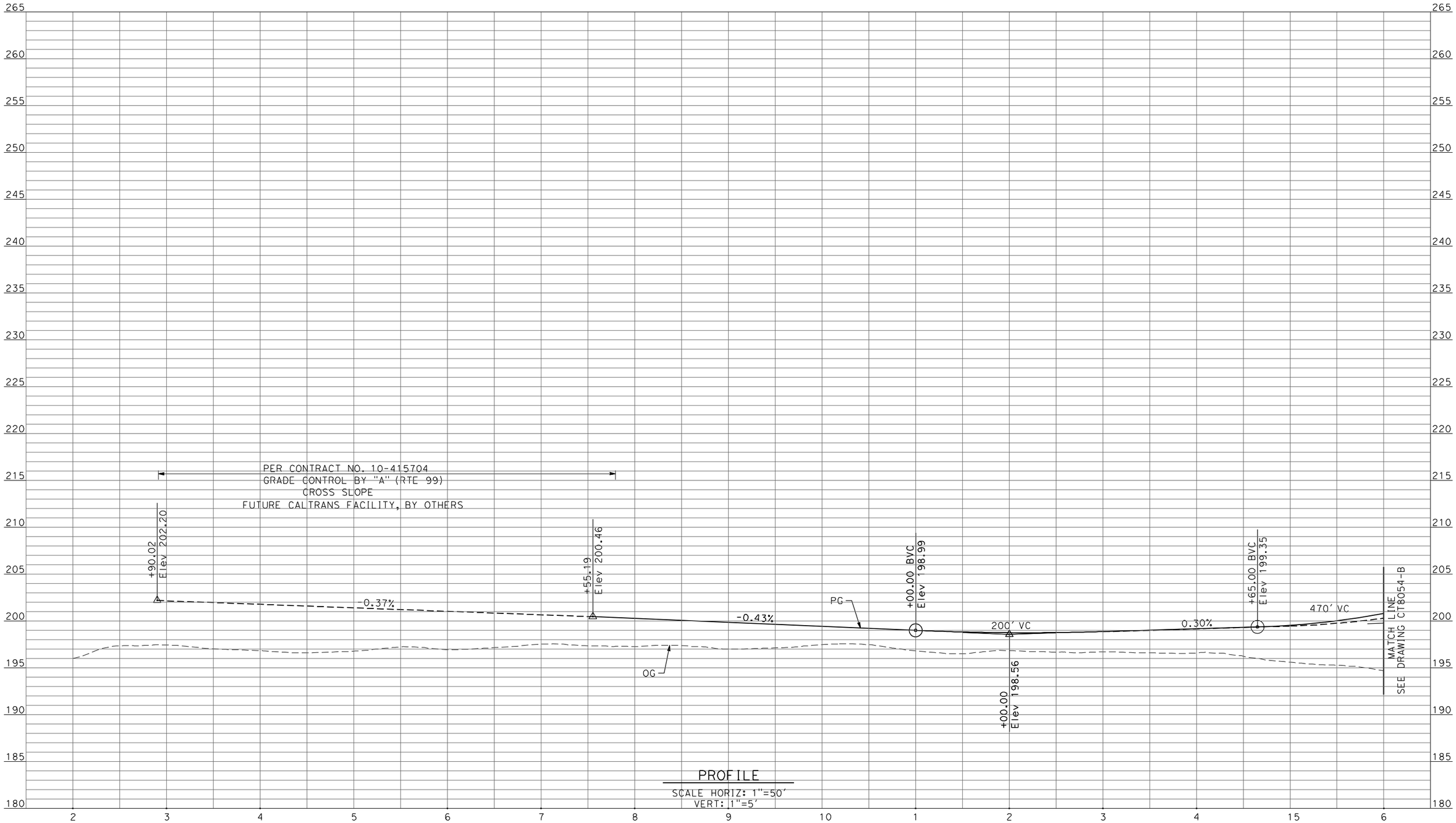

PROFILE

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP
PROFILE
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT8053-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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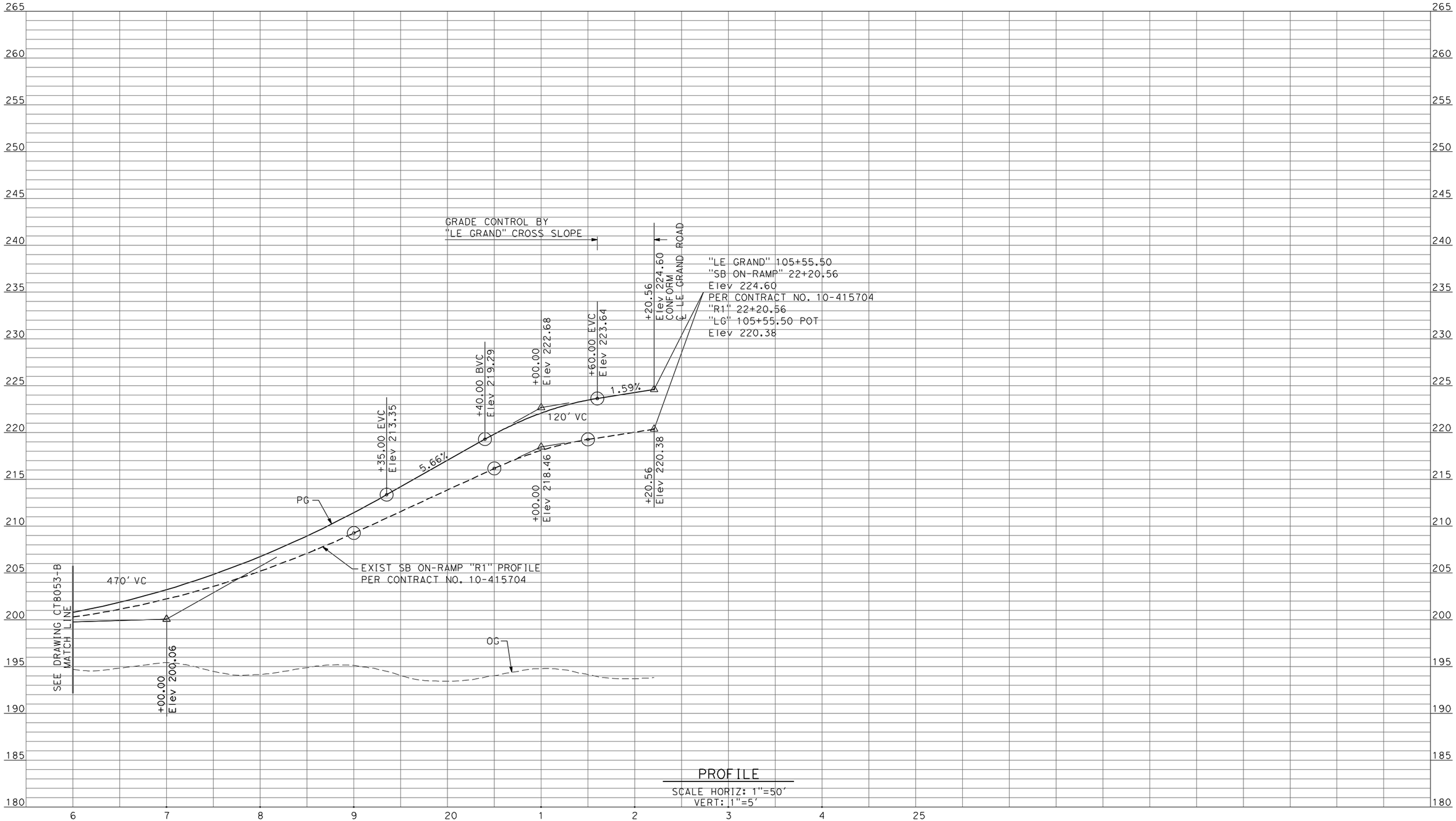

PROFILE

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MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP
PROFILE
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT8054-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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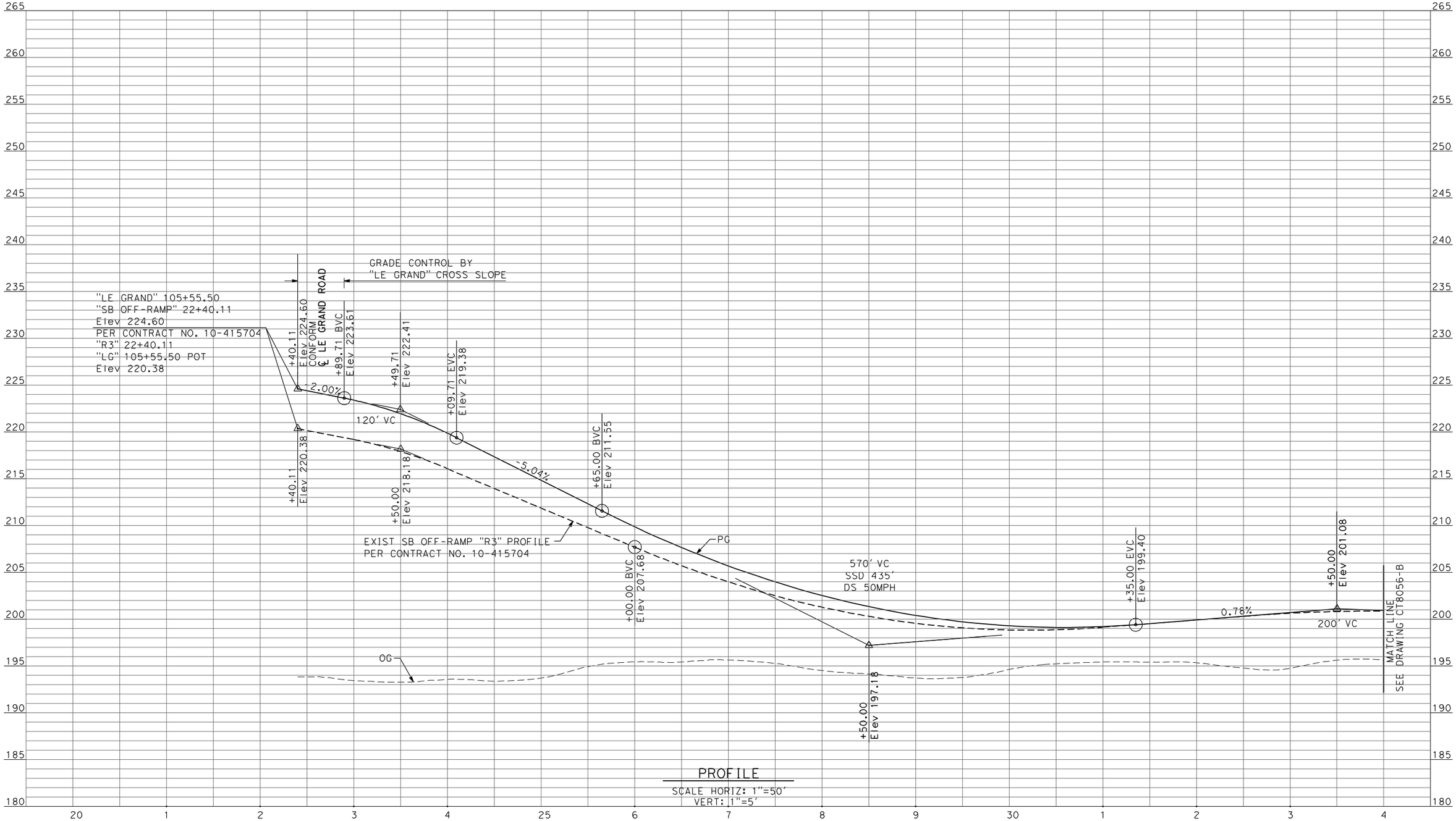

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GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP
PROFILE
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT8055-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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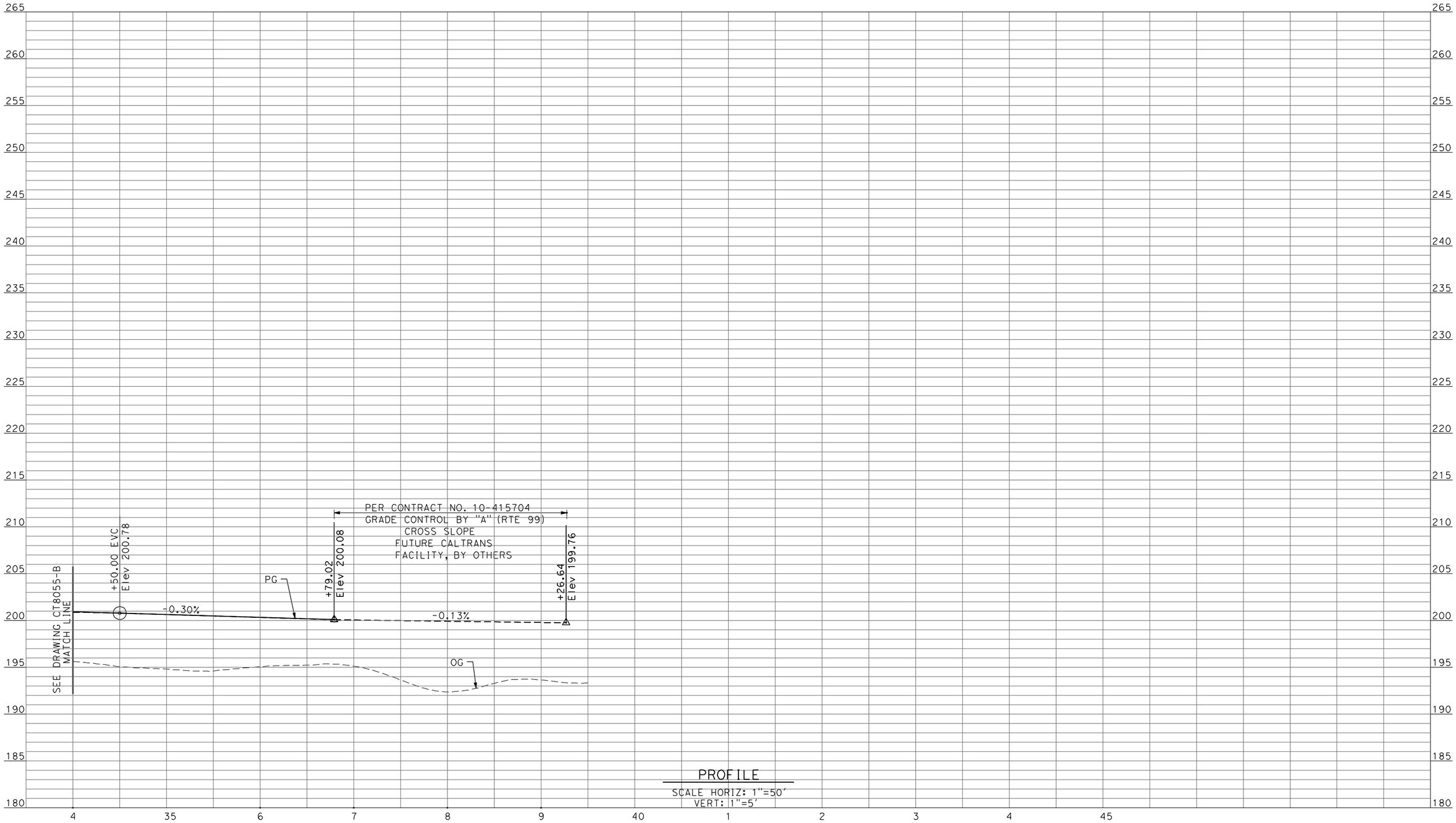

PROFILE

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PROFILE
SHEET 4 OF 4

CONTRACT NO. HSR06-007
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SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	SHEET TITLE LINE 5	SHEET TITLE LINE 6
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		HYBRID ALTERNATIVE/AVENUE 21			
		GENERAL			
	SB1401	HYBRID ALTERNATIVE	AVENUE 21	INDEX OF DRAWINGS	SHEET 1 OF 1
	SB1402	HYBRID ALTERNATIVE	AVENUE 21	STRUCTURE INDEX MAP	SHEET 1 OF 1
		OVERHEAD BRIDGES			
	ST1000	BNSF MAIN LINE - HYBRID	AVENUE 24	AVENUE 8 OVERHEAD	PLANNING STUDY
	ST1113	UPRR/SR 99 MERCED CONNECTION - HYBRID	AVENUE 21	SANDY MUSH ROAD OVERHEAD	PLANNING STUDY
	ST1114	UPRR/SR 99 MERCED CONNECTION - HYBRID	AVENUE 21	LE GRAND OVERHEAD	PLANNING STUDY
	ST1181	UPRR/SR 99 MERCED CONNECTION - HYBRID	AVENUE 21	SR 99 SOUTHBOUND OVERHEAD	PLANNING STUDY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY J. Renteria
IN CHARGE A. Boone
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

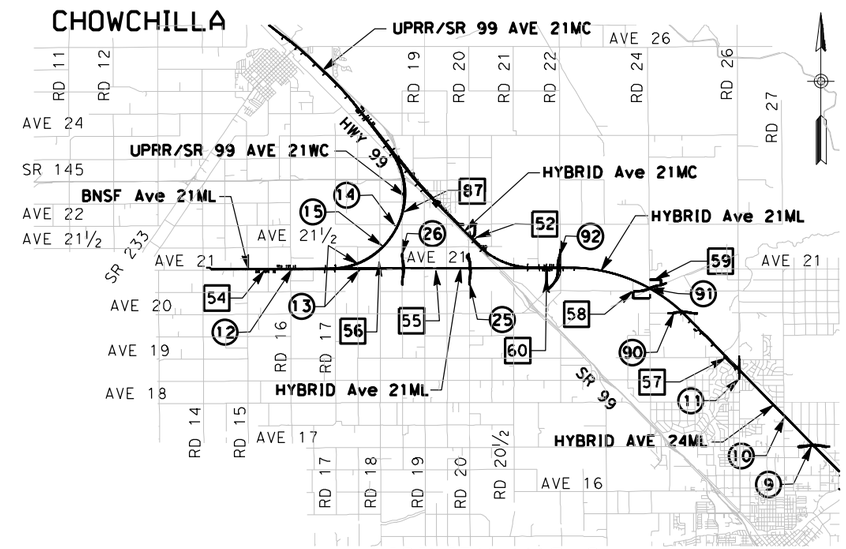
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID ALTERNATIVE
AVENUE 21
INDEX OF DRAWINGS
SHEET 1 OF 1

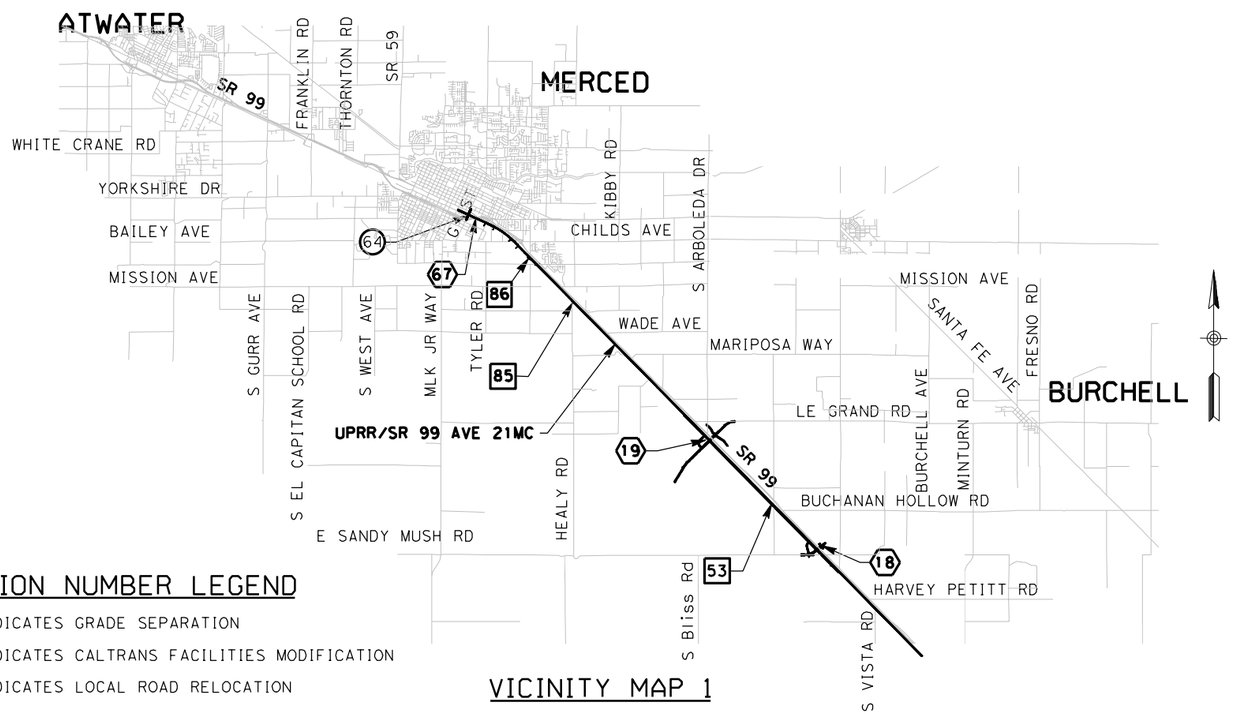
CONTRACT NO. HSR06-007
DRAWING NO. SB1401
SCALE No scale
SHEET NO. OF

cisnerose 4/1/2012 2:02:35 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\MF-SB-1401.dgn

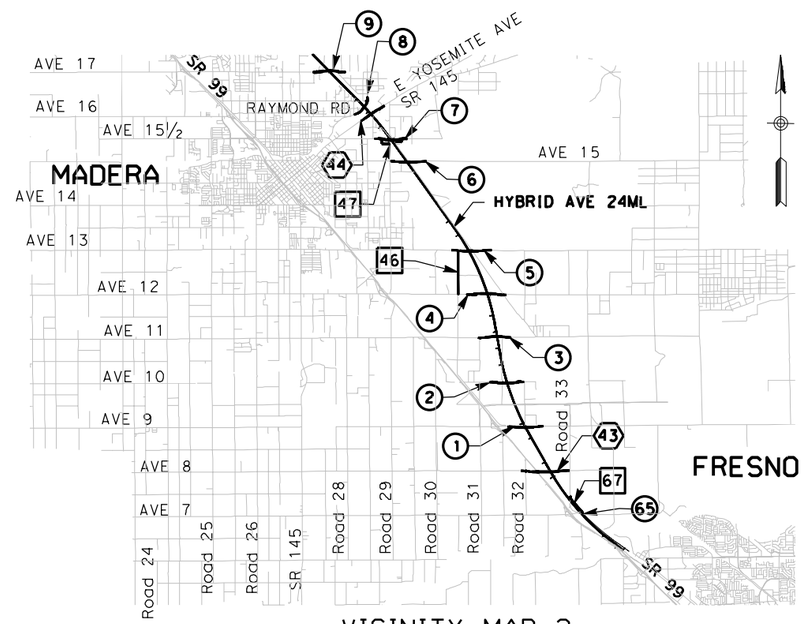
LOCATION NO.	SHEET TITLE	STRUCTURE DWG NO.	ROADWAY DWG NO.
18	GRADE SEPARATION - SANDY MUSH RD OVERHEAD INTERCHANGE	ST1113	CT7034-B - CT7036-B
19	GRADE SEPARATION - LE GRAND RD OVERHEAD INTERCHANGE	ST1114	CT7037-B - CT7043-B
43	CALTRANS - AVENUE 8 OVERHEAD	ST1000	CT2000-A - CT2003-A
67	CALTRANS - SR 99 SOUTHBOUND OVERHEAD	ST1181	



VICINITY MAP 2



VICINITY MAP 1



VICINITY MAP 3

9000 0 9000 18000
GRAPHIC SCALE

LOCATION NUMBER LEGEND

- (X) - INDICATES GRADE SEPARATION
- ⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION
- [X] - INDICATES LOCAL ROAD RELOCATION

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY D. Ayele
IN CHARGE A. Boone
DATE 07/27/2011

RECORD SET
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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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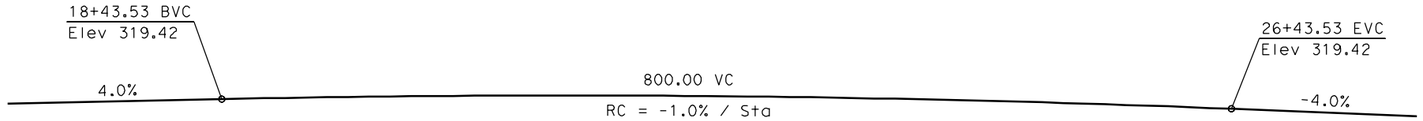
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

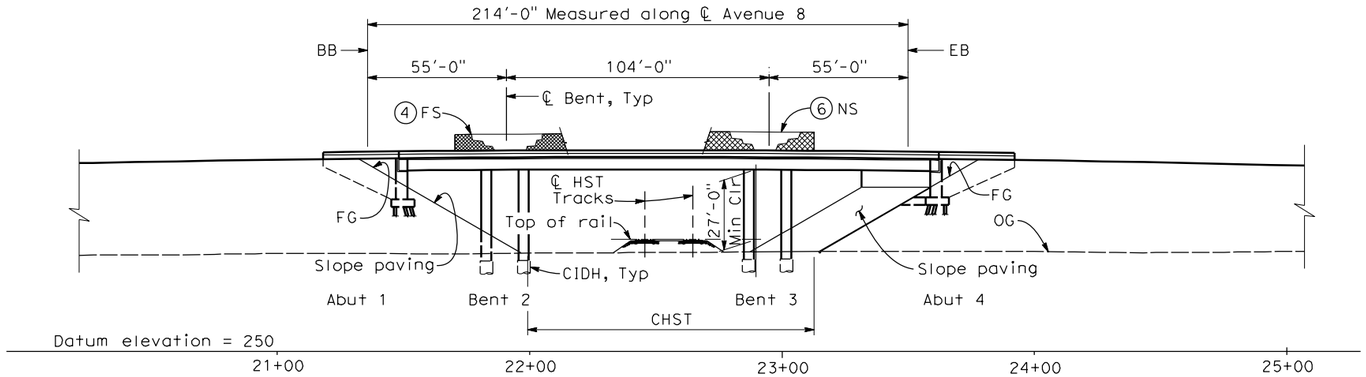
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID ALTERNATIVE
AVENUE 21
STRUCTURE INDEX MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. SB1402
SCALE As shown
SHEET NO. OF

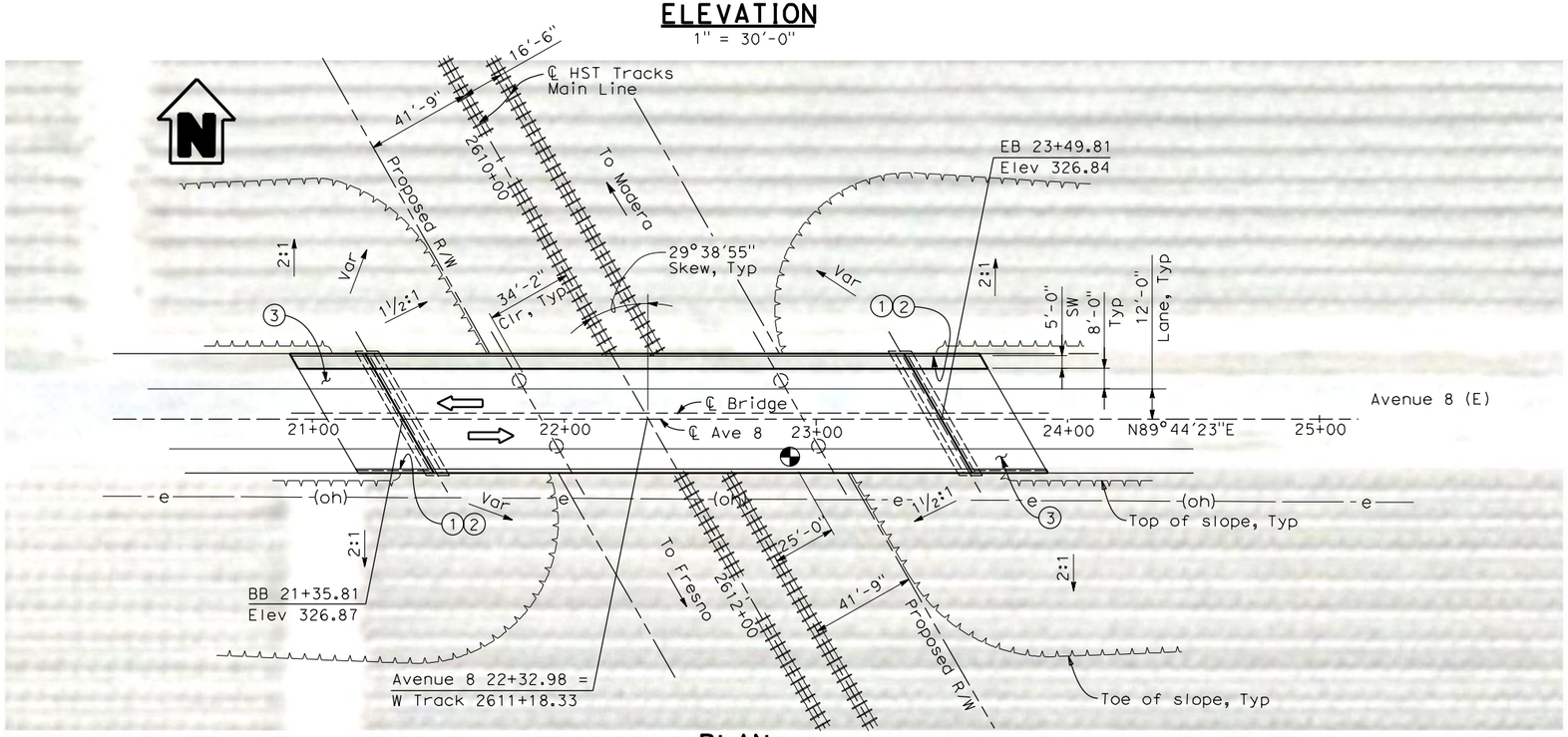
3/30/2012 4:50:45 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\MF-SB-1402.dgn
cisnerose



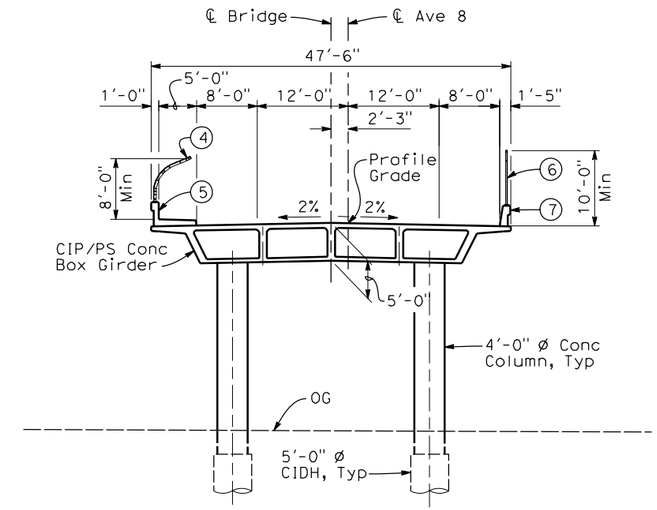
PROFILE GRADE
NTS



ELEVATION
1" = 30'-0"



PLAN
1" = 30'-0"



TYPICAL SECTION
1"=10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 8 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 8 to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND/ABBREVIATIONS:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

e(oh) Electricial over head (existing)

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	214'-0"
WIDTH	=	47'-6"
AREA	=	10,200 ft²
COST/ ▢FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 43

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

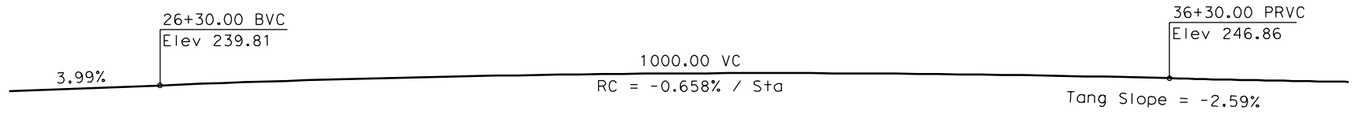
AECOM Technical Services, Inc.
2020 L Street, Suite 300 Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
AVENUE 24
AVENUE 8 OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1000
SCALE As shown
SHEET NO. OF

cisnerose 3/30/2012 4:52:43 PM \\usscrlfp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\W-MF-ST-OH_Ave 8H.dgn



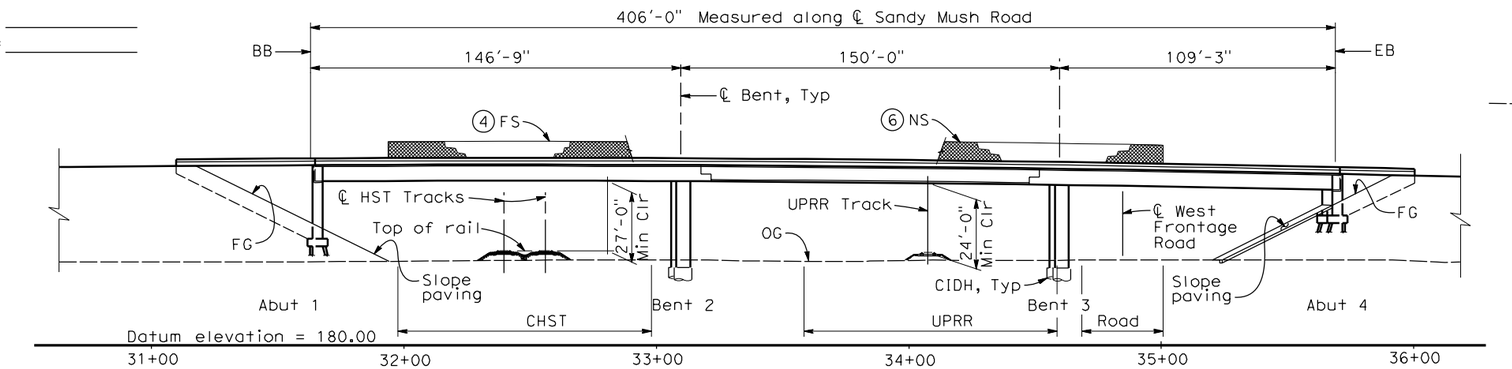
DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-6"
LENGTH	=	406'-0"
WIDTH	=	47'-6"
AREA	=	19,285 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

PROFILE GRADE

NTS

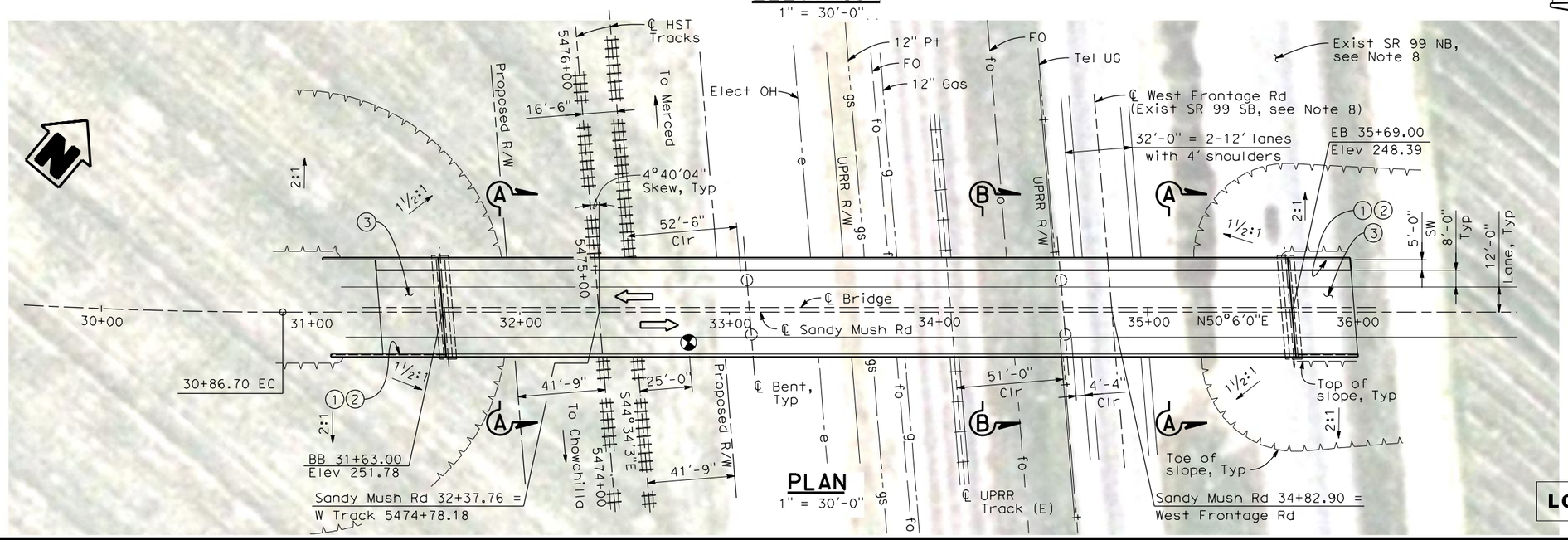
LEGEND/ABBREVIATIONS:

- Direction of traffic
- Point of minimum vertical clearance
- Pt = Petroleum
- UG = Underground
- FO = Fiber Optic



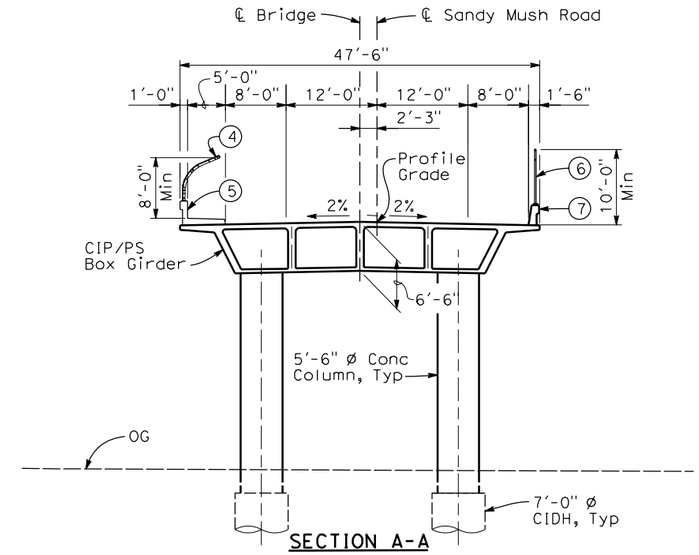
ELEVATION

1" = 30'-0"

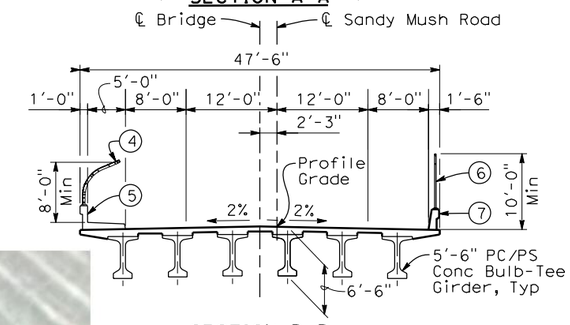


PLAN

1" = 30'-0"



SECTION A-A



SECTION B-B

TYPICAL SECTIONS

1" = 10'-0"

NOTES:

1. Paint "Bridge No. WX-YZ"
2. Paint "Sandy Mush Road OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. SR 99 will be relocated prior to or concurrent with this construction.
9. Bearing of Sandy Mush Road and UPRR track to be verified.
10. Existing underground and overhead utilities to be determined.
11. Location and elevation of existing UPRR track to be determined.

LOCATION 18

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

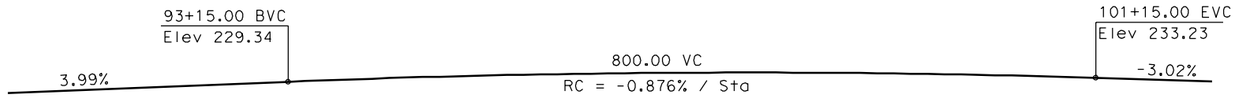
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MERCED CONNECTION - HYBRID
AVENUE 21
SANDY MUSH ROAD OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1113
SCALE As shown
SHEET NO. OF

cisnerose 3/30/2012 4:53:52 PM \\usscr1fp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\WF-MF-ST-OH_Sandy Mush21H-Loc 18.dgn

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	614'-0"
WIDTH	=	47'-6"
AREA	=	29,200 ft^2
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

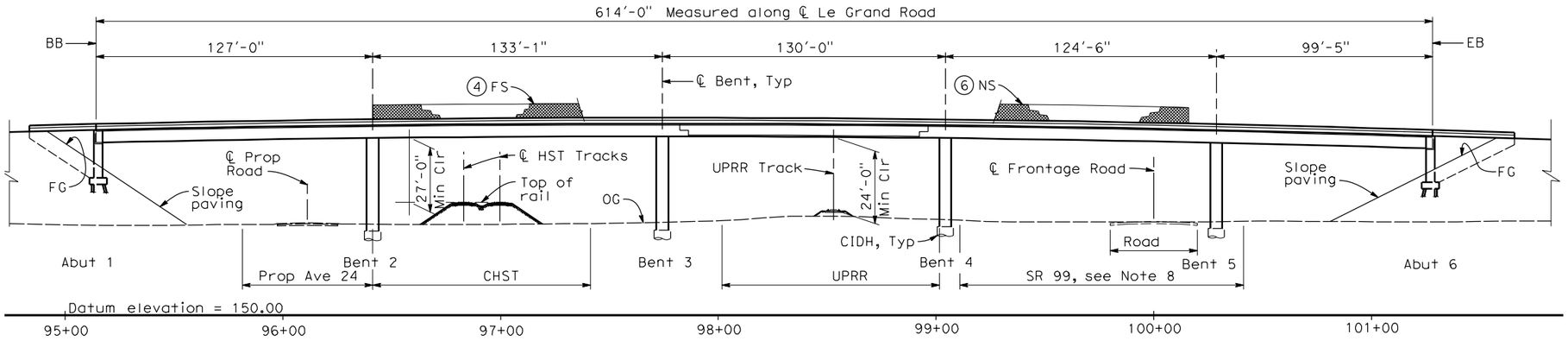


PROFILE GRADE

NTS

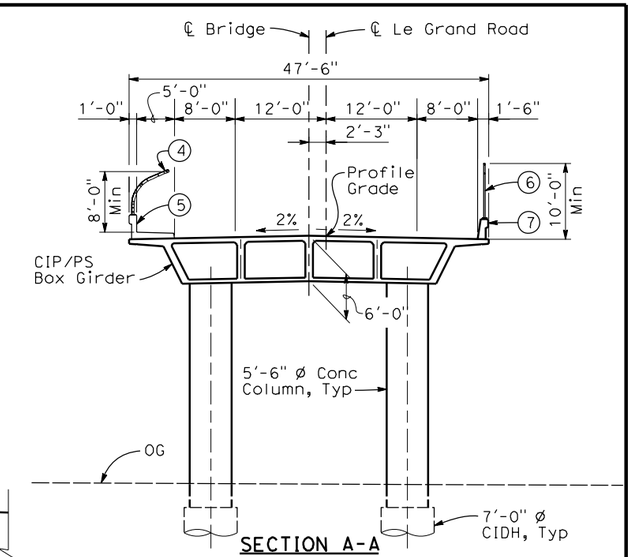
LEGEND/ABBREVIATIONS:

- ⇦ Direction of traffic
- ◐ Point of minimum vertical clearance
- Pt = Petroleum
- UG = Underground
- FO = Fiber Optic

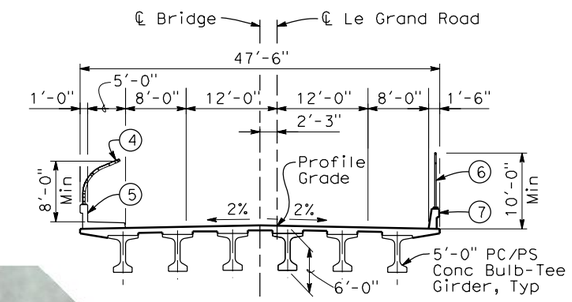


ELEVATION

1" = 30'-0"



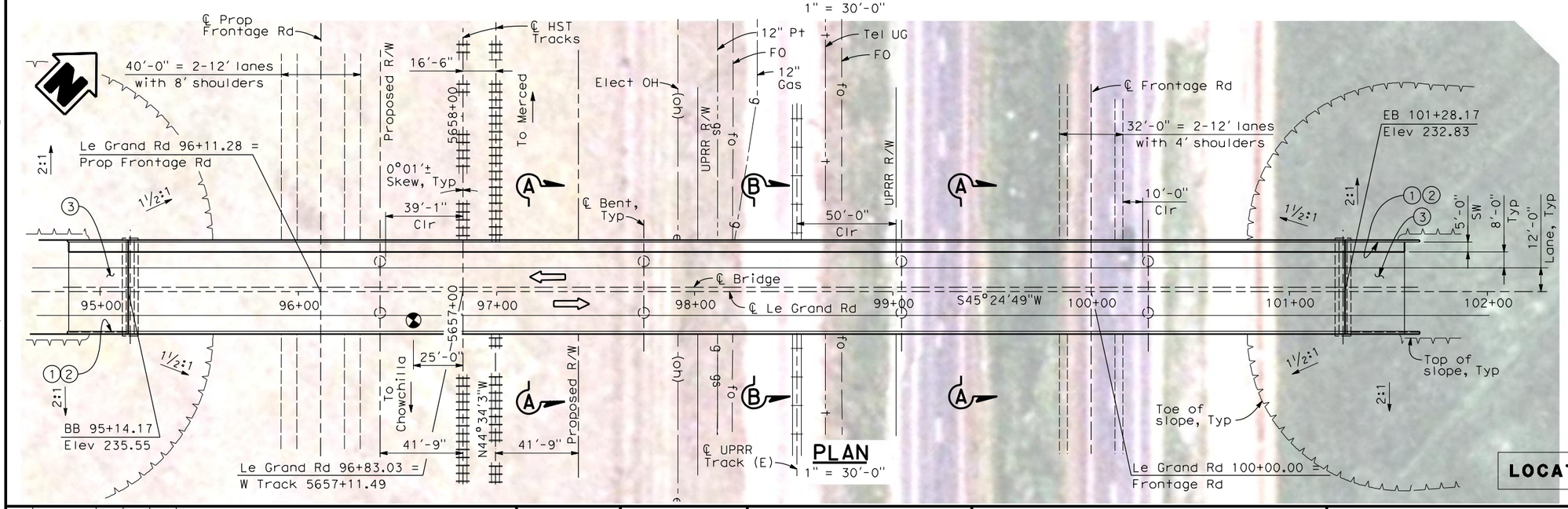
SECTION A-A



SECTION B-B

TYPICAL SECTIONS

1" = 10'-0"



PLAN

1" = 30'-0"

NOTES:

1. Paint "Bridge No. WX-YY"
2. Paint "Le Grand Road OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. SR 99 will be relocated prior to or concurrent with this construction.
9. Bearing of Le Grand Road and UPRR track to be verified.
10. Existing underground and overhead utilities to be determined.
11. Location and elevation of existing UPRR track to be determined.

LOCATION 19

30 0 30 60

1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY T. BARNARD
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

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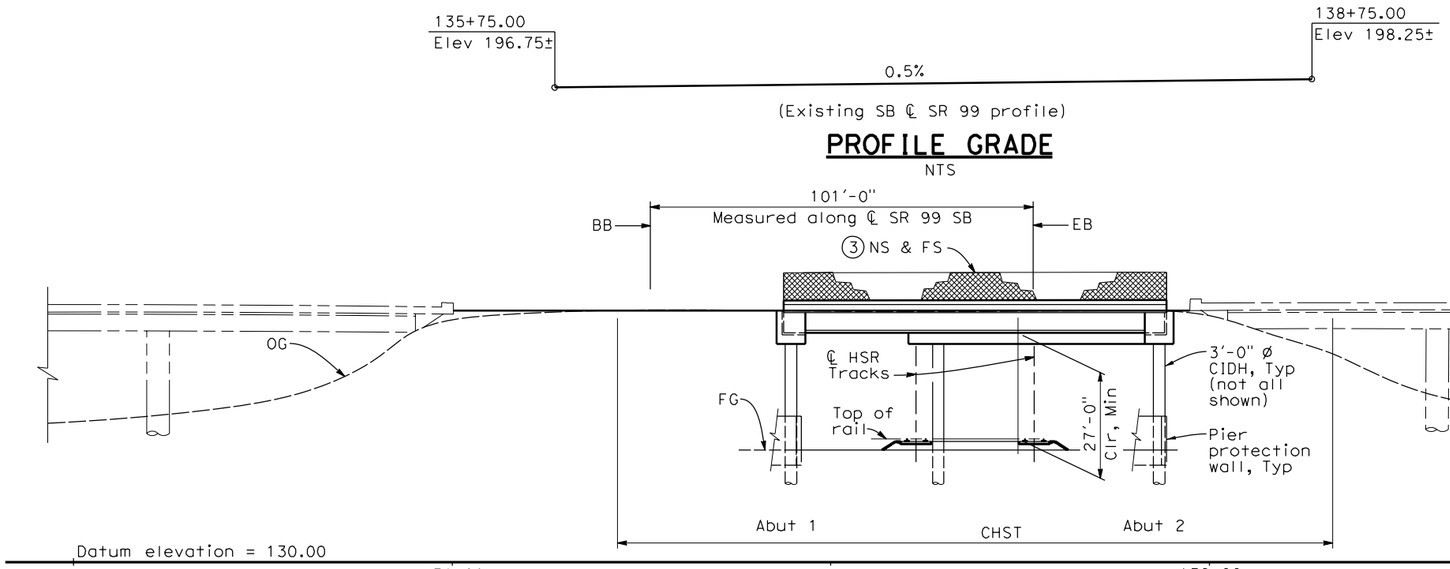
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MERCED CONNECTION - HYBRID
AVENUE 21
LE GRAND ROAD OVERHEAD
PLANNING STUDY

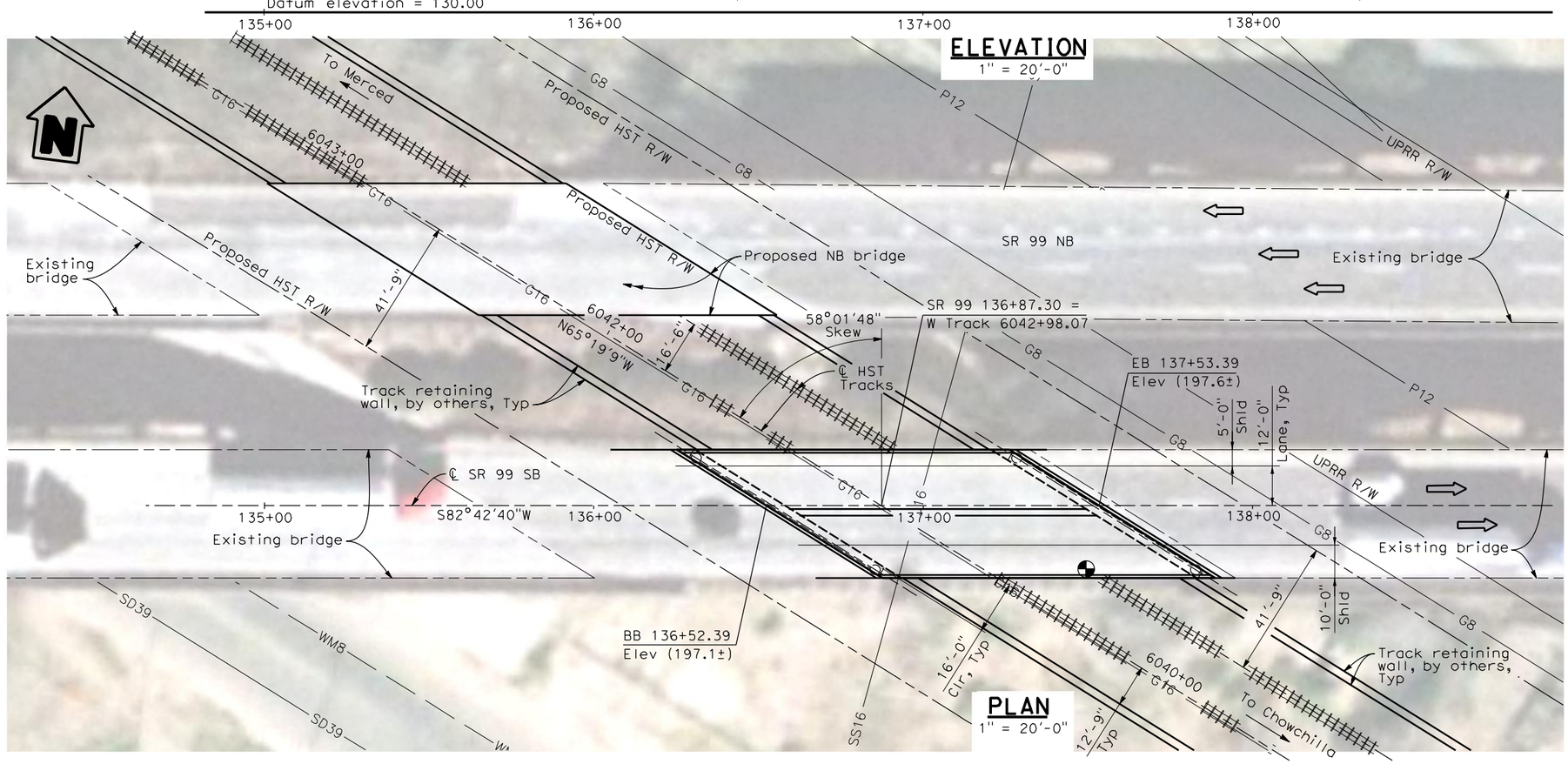
CONTRACT NO. HSR06-007
DRAWING NO. ST1114
SCALE As shown
SHEET NO. OF

\\usscrlfp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 21 - Grade Separtion\W-MF-ST-OH_Le Grand Rdh-Loc 19.dgn 3/30/2012 4:54:44 PM cisnerose



PROFILE GRADE

NTS

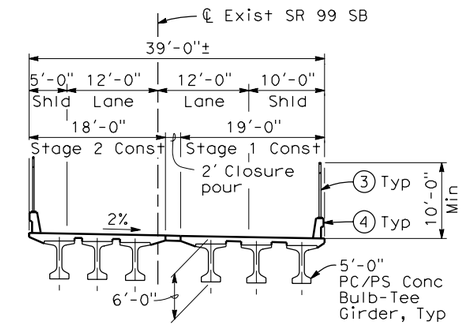


ELEVATION

1" = 20'-0"

PLAN

1" = 20'-0"



TYPICAL SECTION

1" = 10'-0"

NOTES:

1. Paint "Bridge No. WX-YY"
2. Paint "SR 99 OH"
3. Chain Link Railing Type 7 (Mod)
4. Concrete Barrier Type 732
5. Southbound bridge shown, northbound bridge similar.
6. Bearing, stationing and elevation of SR 99 SB to be verified.
7. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

Point of minimum vertical clearance

G = Gas
FO = Fiber Optic
P = Petroleum
SD = Storm Drain
SS = Sanitary Sewer
WM = Water

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	101'-0"
WIDTH	=	39'-0"
AREA	=	3,950 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 67

20 0 20 40
1"=20'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY B. DOLAN
CHECKED BY L. LEUNG
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MERCED CONNECTION - HYBRID
AVENUE 21
SR 99 SOUTHBOUND OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1181
SCALE As shown
SHEET NO. OF

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cisnerose

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
				GENERAL		
		B8990-B	AVE 21 HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 1 OF 1
		B8991-B	AVE 21 HYBRID	GENERAL	ABBREVIATIONS, SYMBOLS AND NOTES	SHEET 1 OF 1
		B9000-B	AVE 21 HYBRID		INDEX MAP	SHEET 1 OF 2
		B9001-B	AVE 21 HYBRID		INDEX MAP	SHEET 2 OF 2
		CB9002-B	UPRR/SR99 MAINLINE/WYE/MERCED - (AVE 21 HYBRID)	LOCAL & FRONTAGE RD	KEY MAP	SHEET 1 OF 2
		CB9003-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	LOCAL & FRONTAGE RD	KEY MAP	SHEET 2 OF 2
		CR8990-B	AVE 21 HYBRID	LOCAL ROADS	TYPICAL CROSS SECTIONS	SHEET 1 OF 1
				AVE 21 HYBRID (LAYOUT)		
46		CR4000-A	BNSF MAIN LINE - (AVE 21 HYBRID)	LOCAL ROAD - ROAD 30 1/2	LAYOUT	SHEET 1 OF 1
47		CR4001-A	BNSF MAIN LINE - (AVE 21 HYBRID)	LOCAL ROAD - ROAD 29	LAYOUT	SHEET 1 OF 1
57		CR4012-A	BNSF MAIN LINE - (AVE 21 HYBRID)	LOCAL ROAD - HANOVER RD	LAYOUT	SHEET 1 OF 1
58		CR4013-A	BNSF MAIN LINE - (AVE 21 HYBRID)	LOCAL ROAD - AVENUE 20 1/2	LAYOUT	SHEET 1 OF 1
59		CR4014-A	BNSF MAIN LINE - (AVE 21 HYBRID)	LOCAL ROAD - AVENUE 20 1/2	LAYOUT	SHEET 1 OF 1
60		CR4015-A	BNSF MAIN LINE - (AVE 21 HYBRID)	LOCAL ROAD - ROAD 22	LAYOUT	SHEET 1 OF 1
67		CR4018-A	BNSF MERCED CONNECTION - (AVE 21 HYBRID)	LOCAL ROAD - ROAD 33	LAYOUT	SHEET 1 OF 1
52		CR9017-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	FAIRMEAD BLVD	LAYOUT	SHEET 1 OF 4
52		CR9018-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	FAIRMEAD BLVD	LAYOUT	SHEET 2 OF 4
52		CR9019-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	FAIRMEAD BLVD	LAYOUT	SHEET 3 OF 4
52		CR9020-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	FAIRMEAD BLVD	LAYOUT	SHEET 4 OF 4
53		CR9021-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 1 OF 8
53		CR9022-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 2 OF 8
53		CR9023-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 3 OF 8
53		CR9024-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 4 OF 8
53		CR9025-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 5 OF 8
53		CR9026-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 6 OF 8
53		CR9027-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 7 OF 8
53		CR9028-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	PROPOSED WEST FRONTAGE ROAD	LAYOUT	SHEET 8 OF 8
54		CR9029-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	AVENUE 21	LAYOUT	STA 63+99.89 TO STA 77+00
54		CR9032-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	AVENUE 21	LAYOUT	STA 77+00 TO STA 135+00
54		CR9033-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	AVENUE 21	LAYOUT	STA 135+00 TO STA 160+00
56		CR9035-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	ROAD 18	LAYOUT	
55		CR9040-B	UPRR/SR99 MAINLINE - (AVE 21 HYBRID)	ROAD 19 AND ROAD 19 1/2	LAYOUT	
85		CR9041-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	HEALY ROAD	LAYOUT	
86		CR9042-B	UPRR/SR99 MERCED - (AVE 21 HYBRID)	GERARD AVENUE/CALTRANS FRONTAGE ROAD	LAYOUT	
87		CR9043-B	UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)	ROAD 18 1/2	LAYOUT	STA 50+00 TO STA 74+07.87
		CR1479A	BNSF MAIN LINE	AVENUE 24/SR152/AVENUE 21	AVENUE 22 CONNECTOR TO ROAD 11	PLAN AND PROFILE
		CR1480A	BNSF MAIN LINE	AVENUE 24/SR152/AVENUE 21	AVENUE 22 CONNECTOR TO ROAD 11	PLAN AND PROFILE
		CR1483A	BNSF MAIN LINE	AVENUE 24/SR152/AVENUE 21	AVENUE 21	PLAN AND PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/28/11	RG			

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID
GENERAL
INDEX OF DRAWINGS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B8990-B
SCALE NONE
SHEET NO. ### OF ###

USER=DeMarcoF 1/12/2012 2:54:30 PM I:\CHSR\60022962\Task-03_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\SUBMITTAL SETS\INDEX OF DRAWING SHEETS FROM SANTA CLARA\for hybrid 21\B8990-B.dgn

ABBREVIATIONS

ALIGNMENT

HORIZONTAL

BC	BEGINNING OF CURVE
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUNT CURVES
PI	POINT OF INTERSECTION OF TWO TANGENTS
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
V, DS	DESIGN VELOCITY IN MILES PER HOUR

VERTICAL

BVC	BEGIN OF VERTICAL CURVE
EVC	END OF VERTICAL CURVE
PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

ALT	ALTERNATIVE
AVE	AVENUE
BB	BEGIN BRIDGE
BEG	BEGIN
BLVD	BOULEVARD
℄	CENTER LINE
CL	CENTERLINE, CLASS
CLR	CLEAR
COL	COLUMN
DWG	DRAWING
EB	END BRIDGE
ELEV	ELEVATION
EQ	EQUATION
ES	EDGE OF SIDEWALK
ETW	EDGE OF TRAVELED WAY
EXIST(E)	EXISTING
FL	FLOW LINE
HORIZ	HORIZONTAL
HP	HINGE POINT
HST	HIGH SPEED TRAIN
HWY	HIGHWAY
IC	INTERCHANGE
IN	INCH
L	LENGTH
LT	LEFT
MBGR	METAL BEAM GUARD RAIL
ML	MAINLINE
MPH	MILES PER HOUR
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
No, NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVERHEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL, FG	PROFILE GRADE LINE
RET	RETAINING
RR	RAILROAD
RD	ROAD
R/W	RIGHT OF WAY
RT	RIGHT
SB	SOUTH BOUND
SHLD	SHOULDER
SR	STATE ROUTE
SHT	SHEET
SS	SANITARY SEWER
SSD	STOPPING SIGHT DISTANCE
ST	STREET
STA	STATION
STD	STANDARD
SD	STORM DRAIN
STRUCT, STR	STRUCTURE
T	TANGENT
TEL	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE
TOR	TOP OF RAIL
TK	TRACK
TYP	TYPICAL
TBD	TO BE DETERMINED
TF	TELECOMMUNICATIONS FIBER OPTIC
UPRR	UNION PACIFIC RAILROAD
VAR	VARIES
V VERT	VERTICAL
W	WATER, WEST

SYMBOLS

	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY OR EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
G16	GAS LINE (16")
TC	COMMUNICATION LINE
W	WATER LINE
FO	FIBER OPTIC LINE
E	ELECTRICAL LINE
	ELECTRICAL TOWER
S	SEWER LINE
SD	STORM DRAIN LINE
O	FUEL LINE
TC	TELEPHONE LINE
P12	PETROLEUM LINE (12")
(OH)	OVERHEAD
	NORTH ARRROW
	PVI
	MBGR
	DIRECTION OF TRAVEL
250	PROPOSED CONTOUR

REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE A. BOONE
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID
GENERAL
ABBREVIATIONS, SYMBOLS AND NOTES
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B8991-B
SCALE NO SCALE
SHEET NO. ### OF ###

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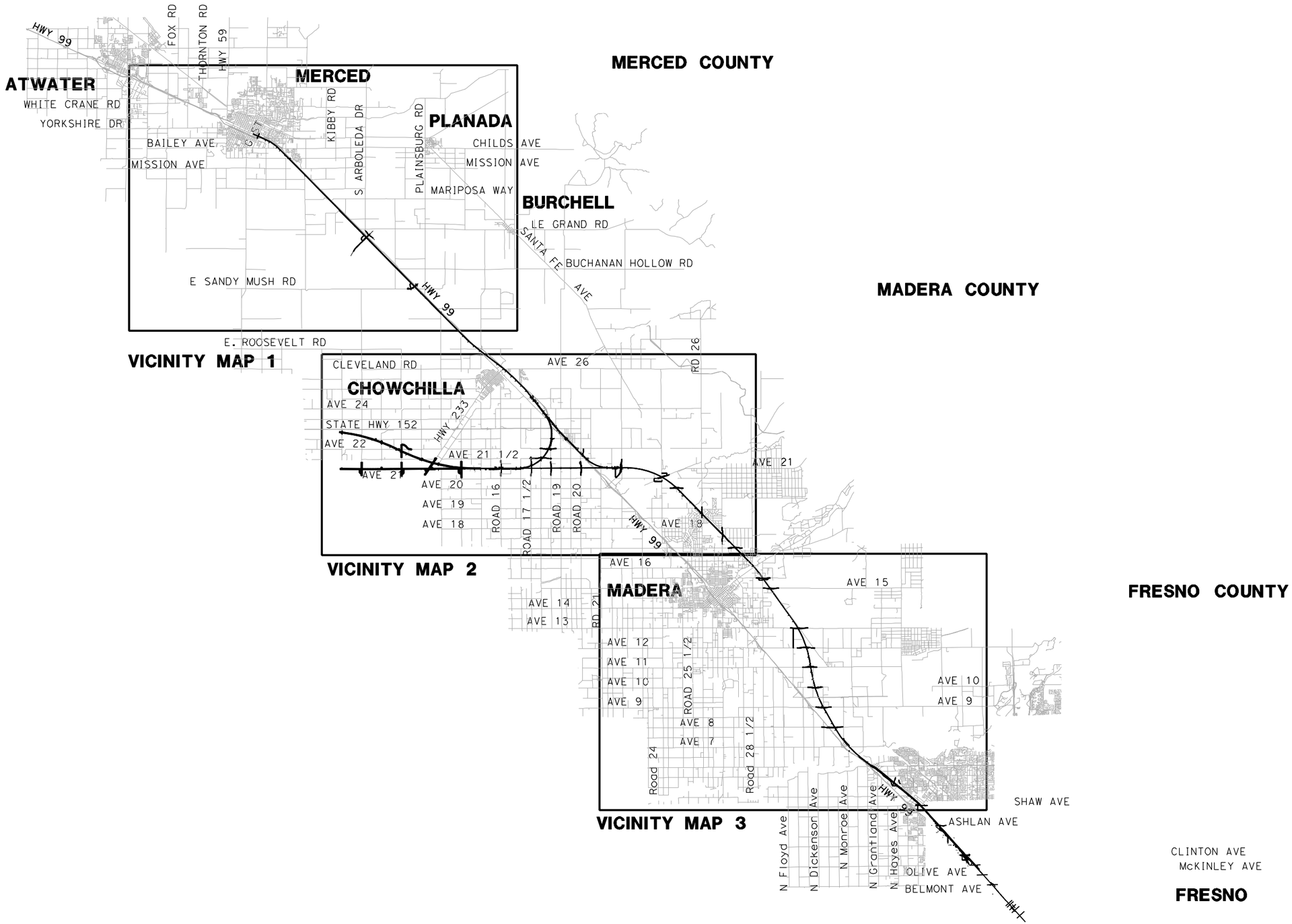

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1	12/12/2011	RG			

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID

INDEX MAP
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. B9000-B
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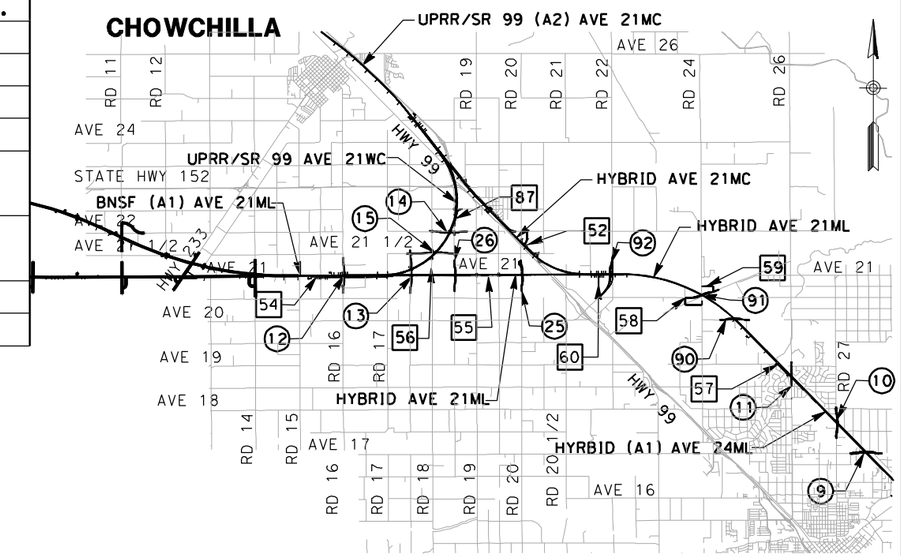
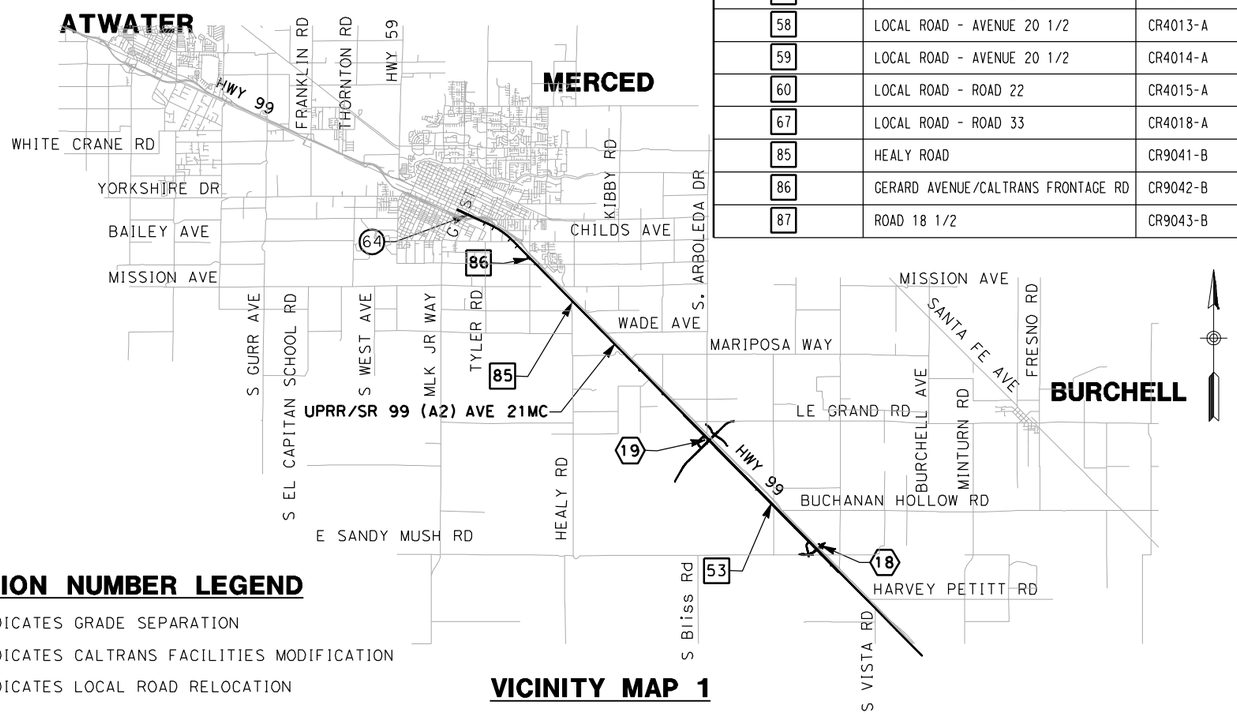
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
1	GRADE SEPARATION - AVENUE 9	CT0001-A - CT0003-A	ST1001
2	GRADE SEPARATION - AVENUE 10	CT0004-A - CT0006-A	ST1002
3	GRADE SEPARATION - AVENUE 11	CT0007-A - CT0009-A	ST1003
4	GRADE SEPARATION - AVENUE 12	CT0010-A - CT0012-A	ST1004
5	GRADE SEPARATION - AVENUE 13	CT0013-A - CT0016-A	ST1005
6	GRADE SEPARATION - AVENUE 15	CT0017-A - CT0019-A	ST1006
7	GRADE SEPARATION - AVENUE 15 1/2	CT0020-A - CT0022-A	ST1007
9	GRADE SEPARATION - AVENUE 17	CT0026-A - CT0028-A	ST1009
10	GRADE SEPARATION - ROAD 27	CT0029-A - CT0031-A	ST1010
11	GRADE SEPARATION - ROAD 26	CT0032-A - CT0034-A	ST1011
12	GRADE SEPARATION - ROAD 16	CT5000-B - CT5003-B	ST1101
13	GRADE SEPARATION - ROAD 17 1/2	CT5004-B - CT5007-B	ST1102 - ST1103
14	GRADE SEPARATION - AVENUE 22	CT5016-B - CT5018-B	ST1106
15	GRADE SEPARATION - AVENUE 21 1/2	CT5019-B - CT5022-B	ST1115
25	GRADE SEPARATION - ROAD 20	CT0076-A - CT0078-A	ST1026
26	GRADE SEPARATION - ROAD 18 1/2	CT0079-A - CT0081-A	ST1027
64	GRADE SEPARATION - G STREET	CT0149-A	ST1180

LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
65	GRADE SEPARATION - AVENUE 7	CT0146-A - CT0148-A	ST1070
90	GRADE SEPARATION - AVENUE 20	CT0066-A - CT0068-A	ST1090
91	GRADE SEPARATION - AVENUE 20 1/2	CT0069-A - CT0071-A	ST1091
92	GRADE SEPARATION - ROAD 22	CT0073-A - CT0075-A	ST1092
18	GRADE SEPARATION - SANDY MUSH RD INTERCHANGE	CT7034-B - CT7036-B	ST1113
19	GRADE SEPARATION - LE GRAND RD INTERCHANGE	CT7037-B - CT7043-B	ST1114
43	CALTRANS - AVENUE 8	CT2001-A - CT2003-A	ST1000
46	LOCAL ROAD - ROAD 30 1/2	CR4000-A	
47	LOCAL ROAD - ROAD 29	CR4001-A	
52	FAIRMEAD BLVD	CR9017-B - CR9020-B	
53	PROPOSED WEST FRONTAGE ROAD	CR9021-B - CR9028-B	
54	AVENUE 21 AVENUE 21	CR9029-B CR9032-B - CR9033-B	
55	ROAD 19 & ROAD 19 1/2	CR9040-B	
56	ROAD 18	CR9035-B	
57	LOCAL ROAD - HANOVER RD	CR4012-A	
58	LOCAL ROAD - AVENUE 20 1/2	CR4013-A	
59	LOCAL ROAD - AVENUE 20 1/2	CR4014-A	
60	LOCAL ROAD - ROAD 22	CR4015-A	
67	LOCAL ROAD - ROAD 33	CR4018-A	
85	HEALY ROAD	CR9041-B	
86	GERARD AVENUE/CALTRANS FRONTAGE RD	CR9042-B	
87	ROAD 18 1/2	CR9043-B	



VICINITY MAP 2



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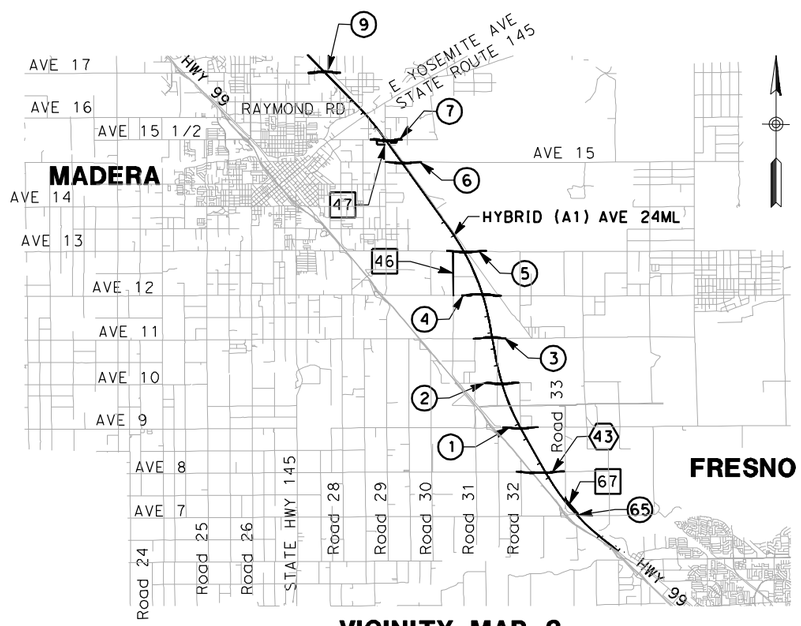

VICINITY MAP 3

9000 0 9000 18000
GRAPHIC SCALE

LOCATION NUMBER LEGEND

(X) - INDICATES GRADE SEPARATION

⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION

[X] - INDICATES LOCAL ROAD RELOCATION

REV	DATE	BY	CHK	APP	DESCRIPTION
2	02/24/2012	RG			
1	12/12/2011	RG			

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID

INDEX MAP
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. B9001-B
SCALE NO SCALE
SHEET NO. ### OF ###

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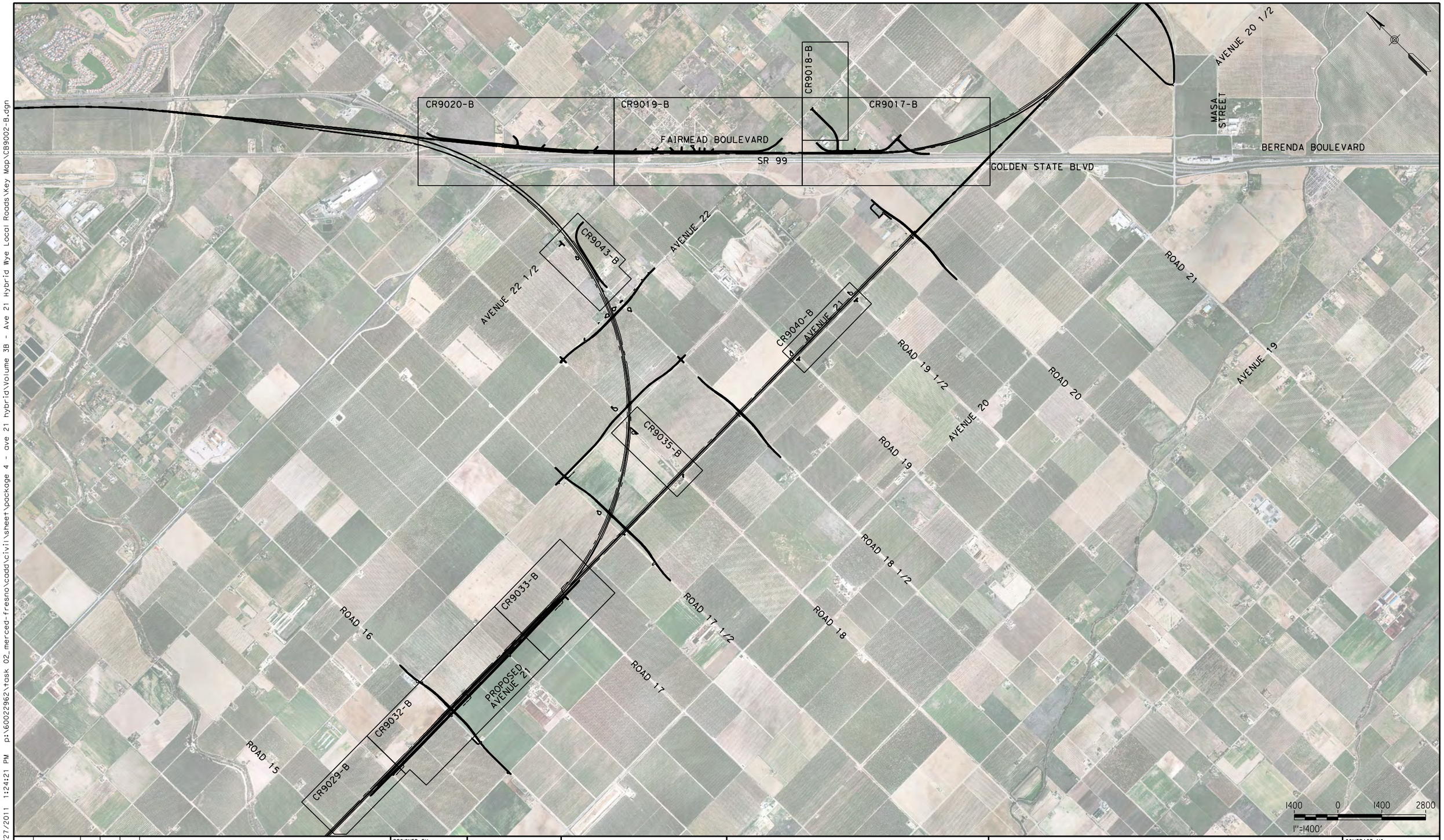

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE/MERCED - (AVE 21 HYBRID)
LOCAL & FRONTAGE RD
KEY MAP
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CB9002-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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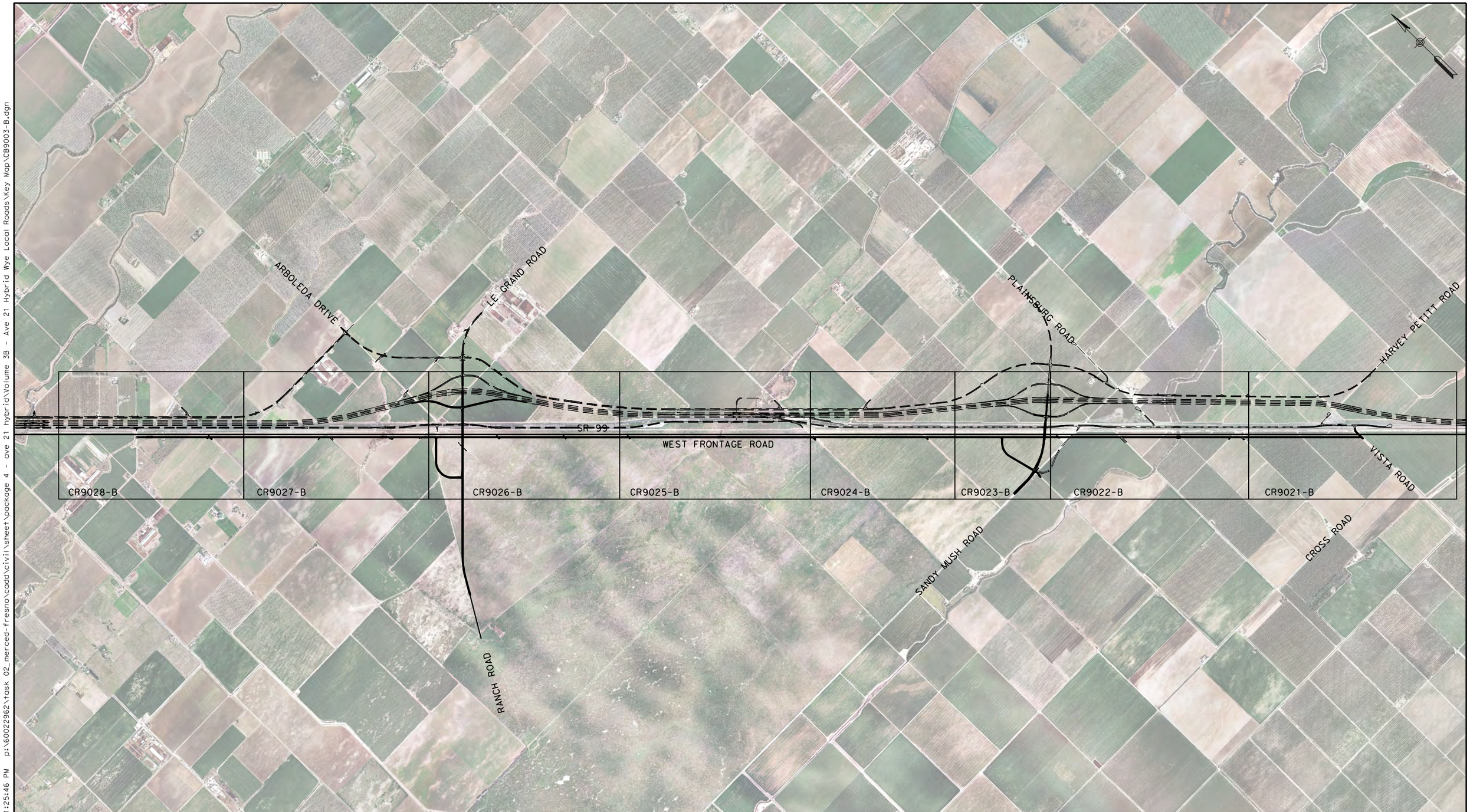

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
LOCAL & FRONTAGE RD
KEY MAP
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CB9003-B
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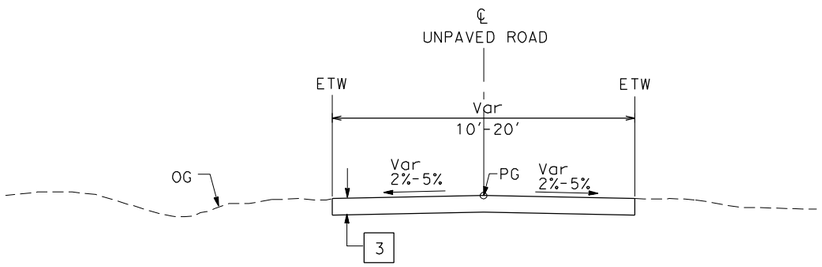
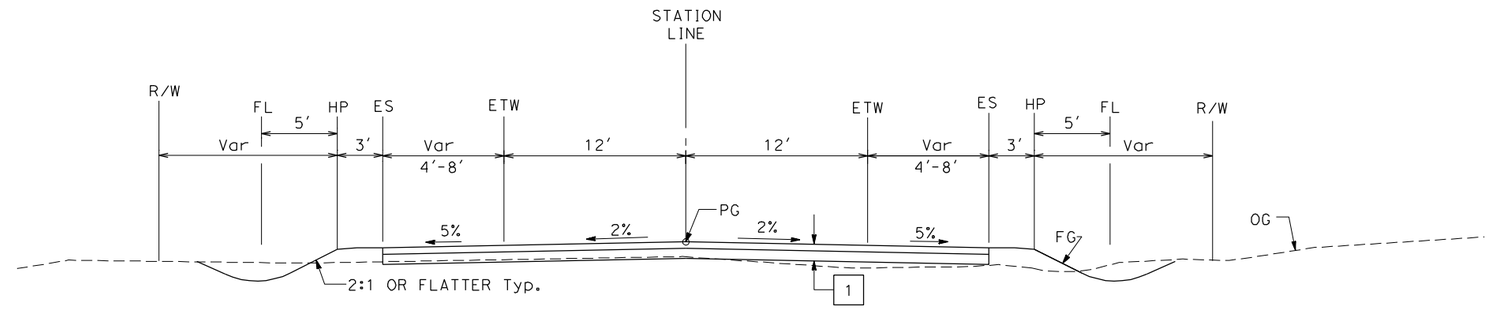


UNPAVED ROAD (TYP)
SEE LAYOUT SHEETS
FOR ACTUAL ROADWAY WIDTHS

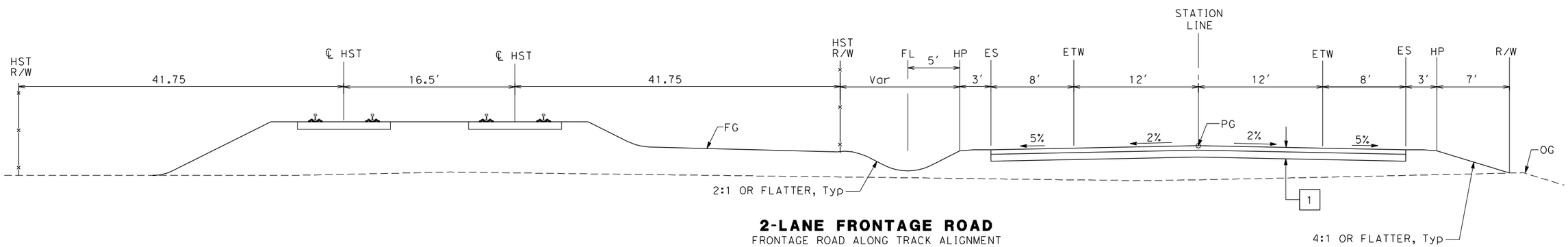


2-LANE FRONTAGE ROAD
SEE LAYOUT SHEETS
FOR ACTUAL SHOULDER WIDTHS

STRUCTURAL SECTIONS:

1 — HMA TYPE A
AB CLASS 2

3 — AB CLASS 2



2-LANE FRONTAGE ROAD
FRONTAGE ROAD ALONG TRACK ALIGNMENT

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
AVE 21 HYBRID
LOCAL ROADS
TYPICAL CROSS SECTIONS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CR8990-B
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SHEET NO. ### OF ###

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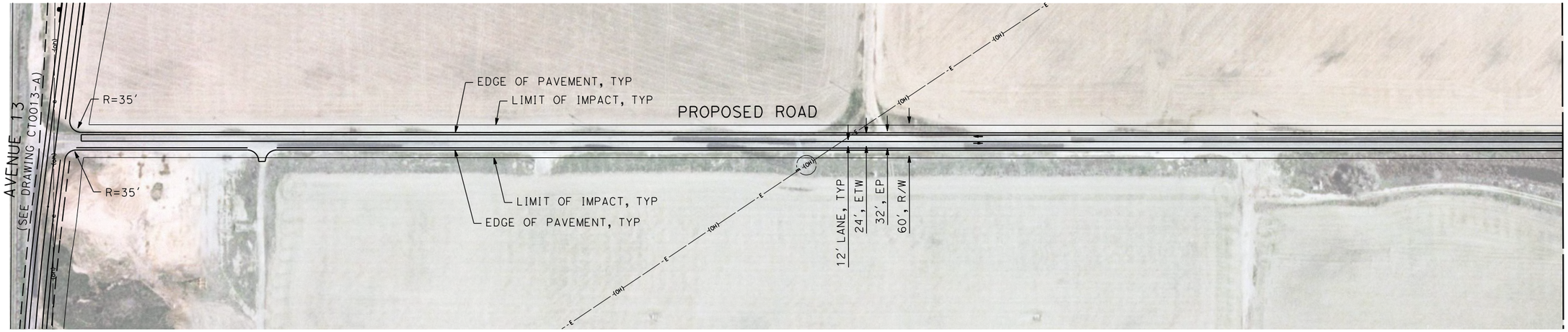

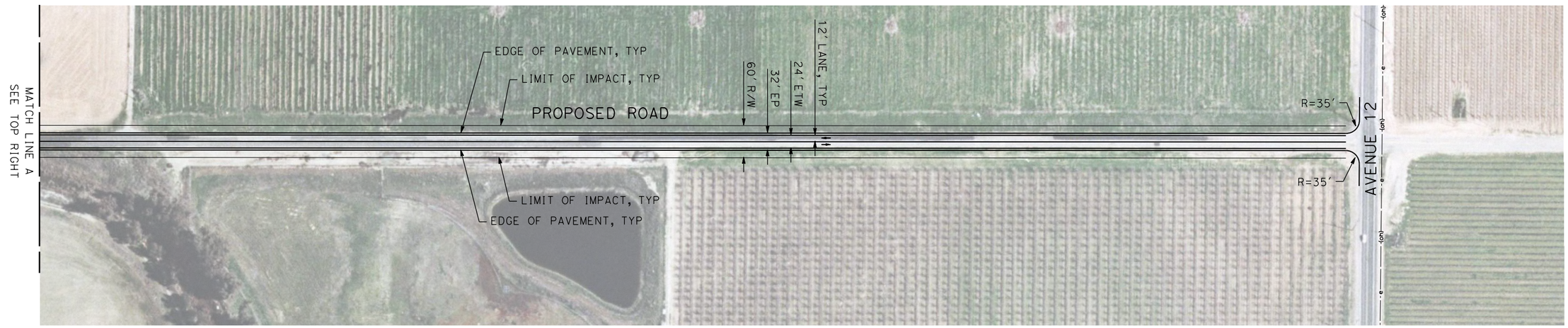

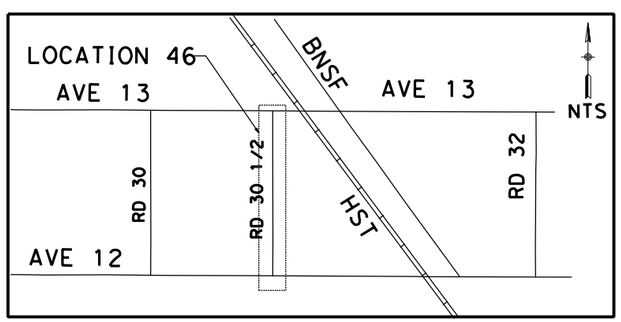

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
LOCAL ROAD - ROAD 30 1/2
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HST06-007
DRAWING NO. CR4000-A
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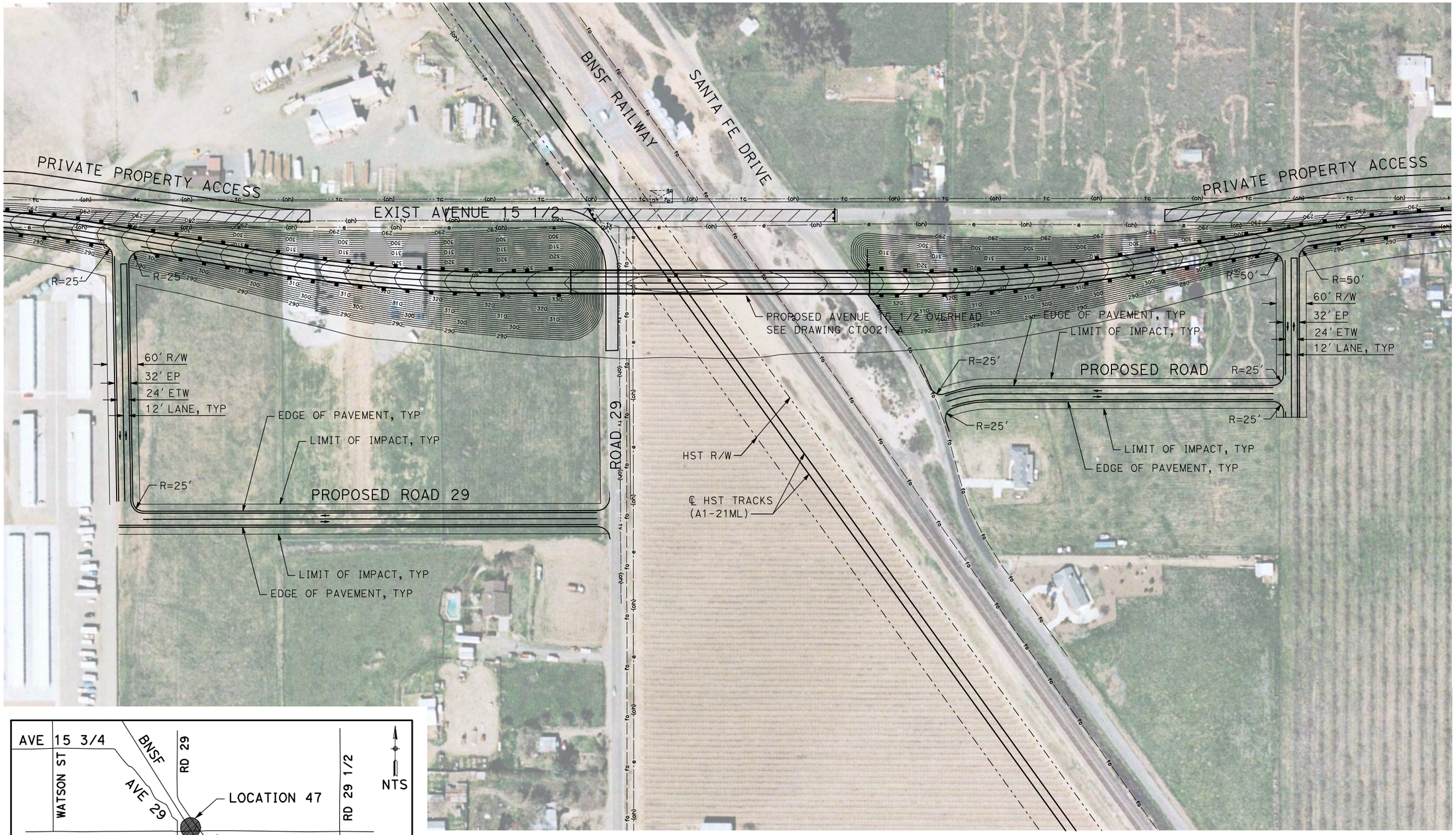

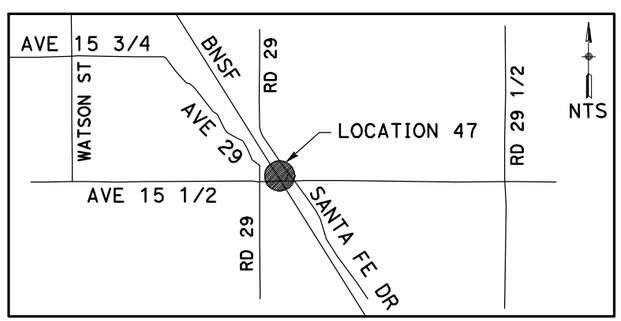

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (AVE 21 HYBRID)
LOCAL ROAD - ROAD 29
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HST06-007
DRAWING NO. CR4001-A
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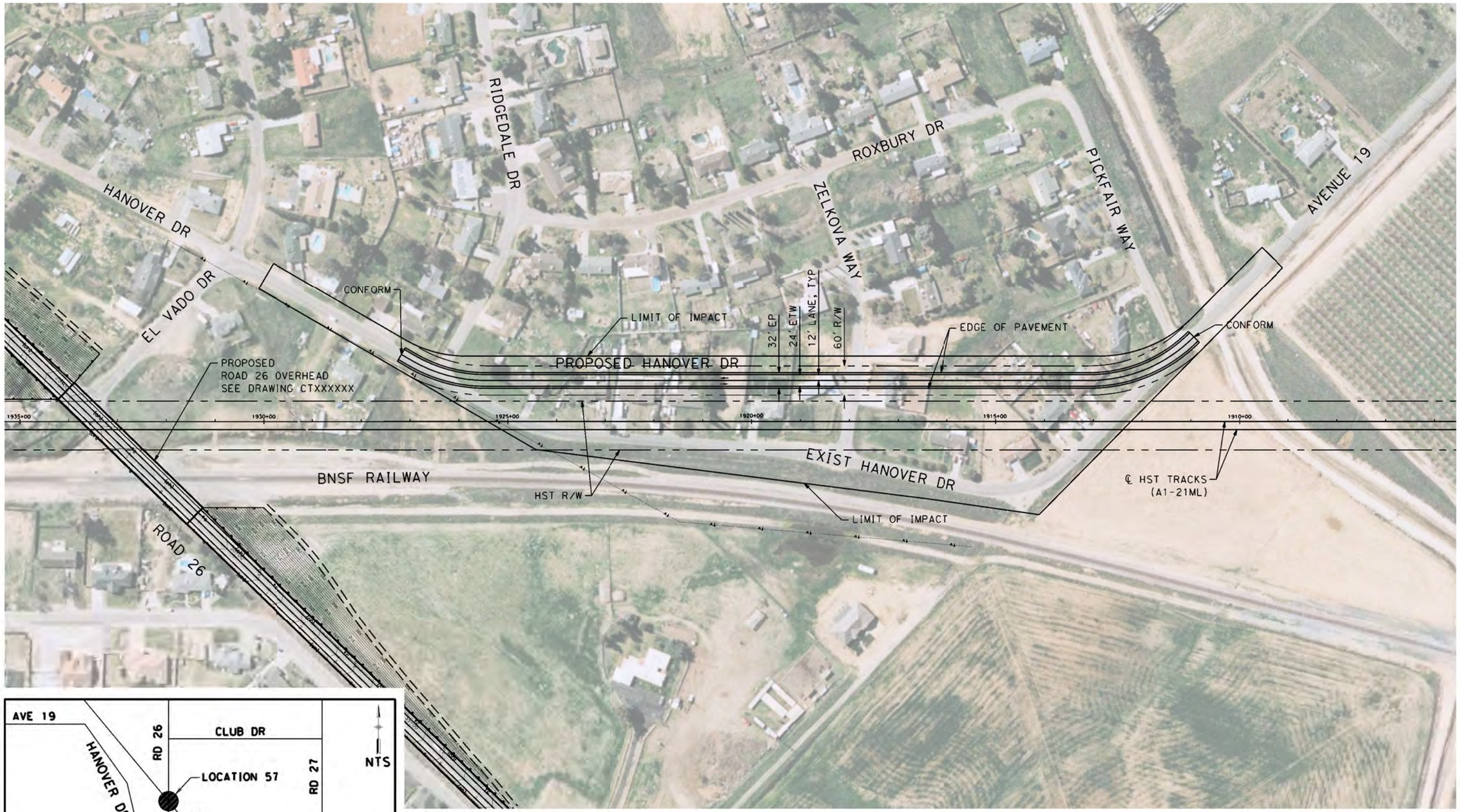

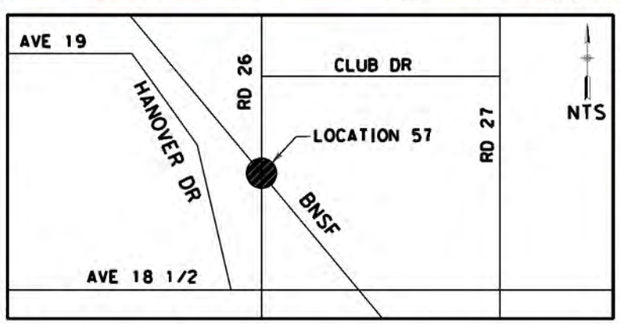

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID MAIN LINE - (AVE 21 WYE)
LOCAL ROAD - HANOVER DR
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HST06-007
DRAWING NO. CR4012-A
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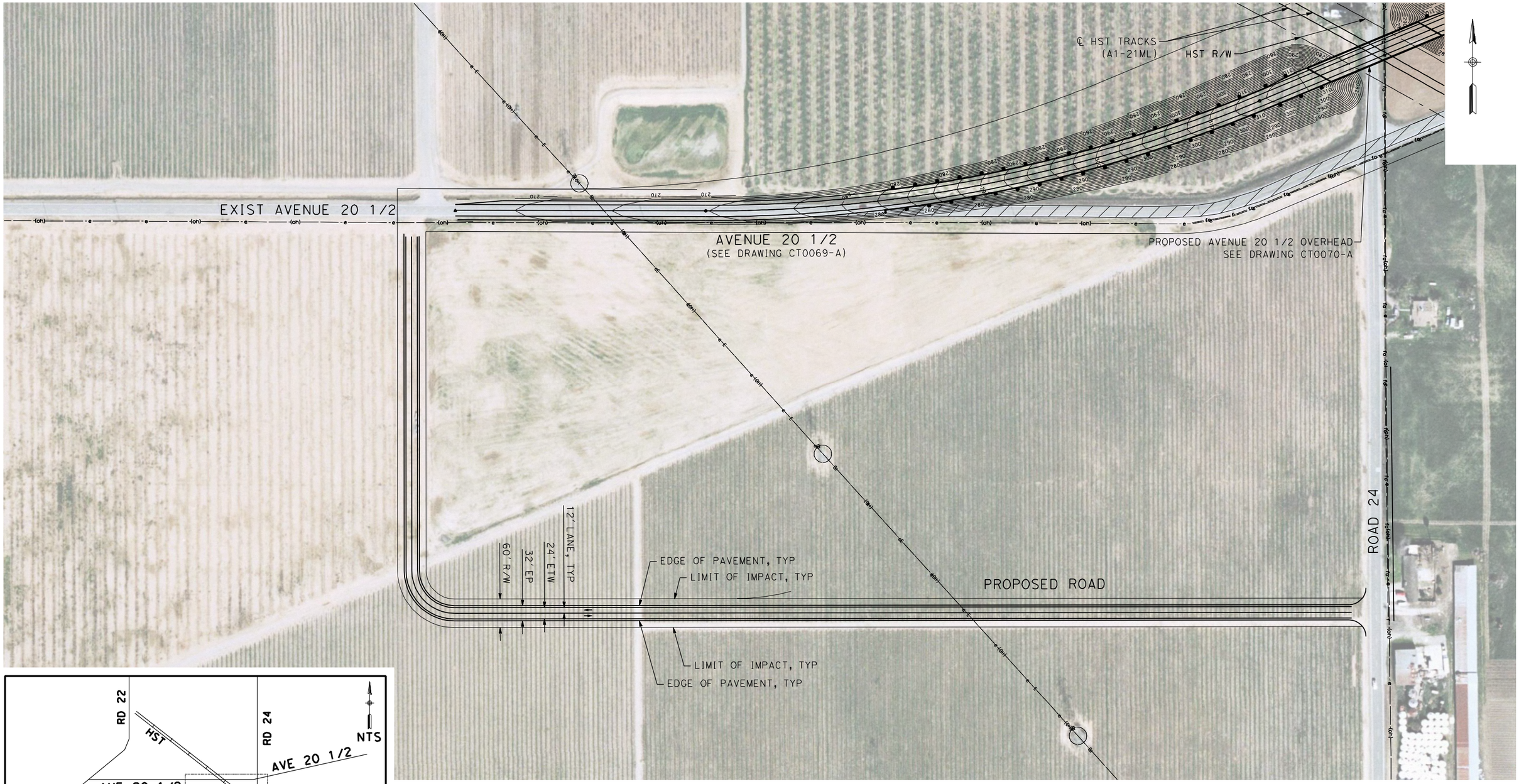

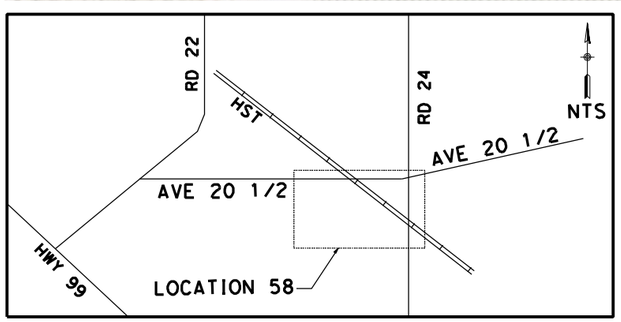

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
LOCAL ROAD - AVENUE 20 1/2
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HST06-007
DRAWING NO. CR4013-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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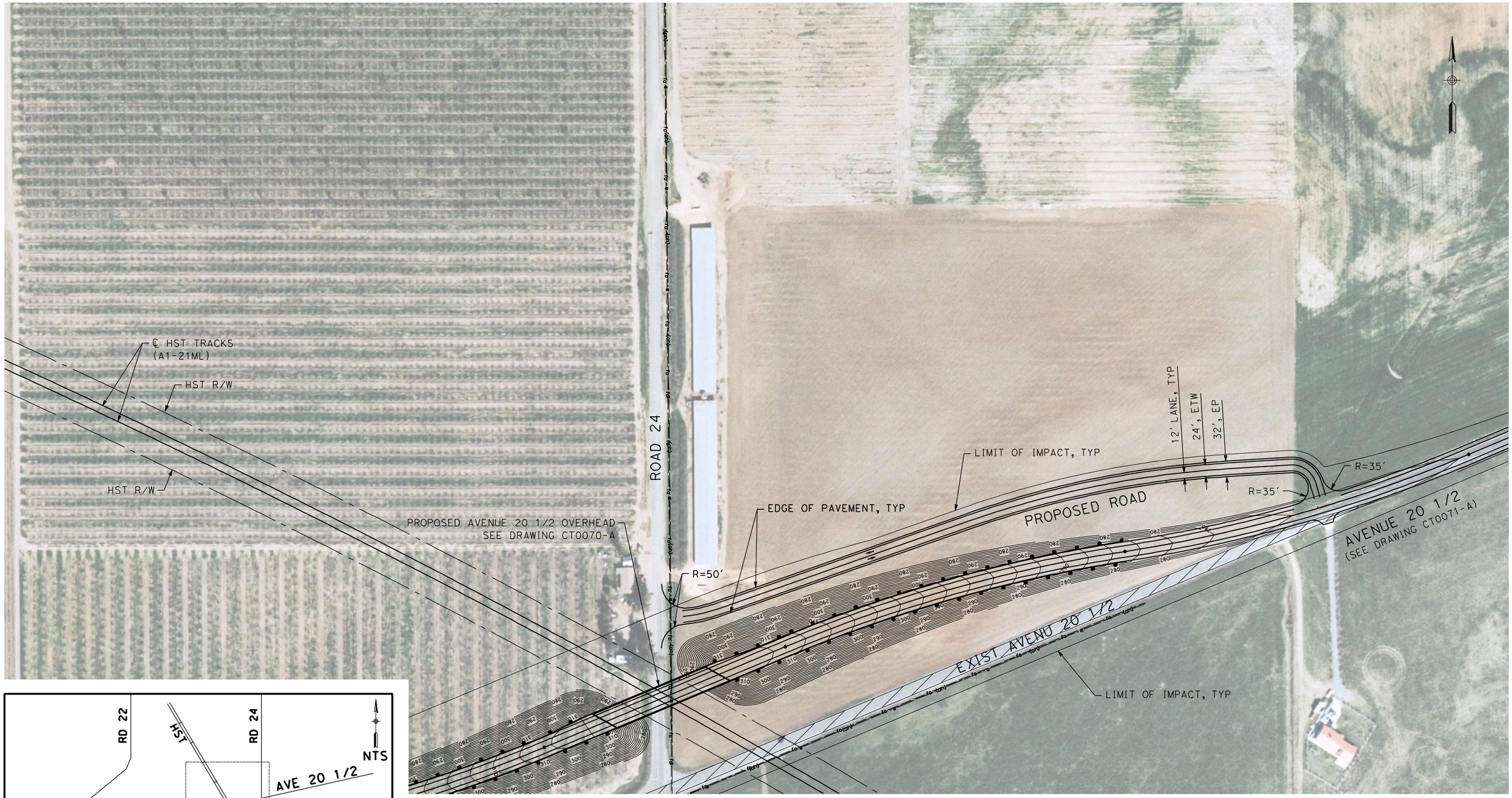

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
LOCAL ROAD - AVENUE 20 1/2
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HST06-007
DRAWING NO. CR4014-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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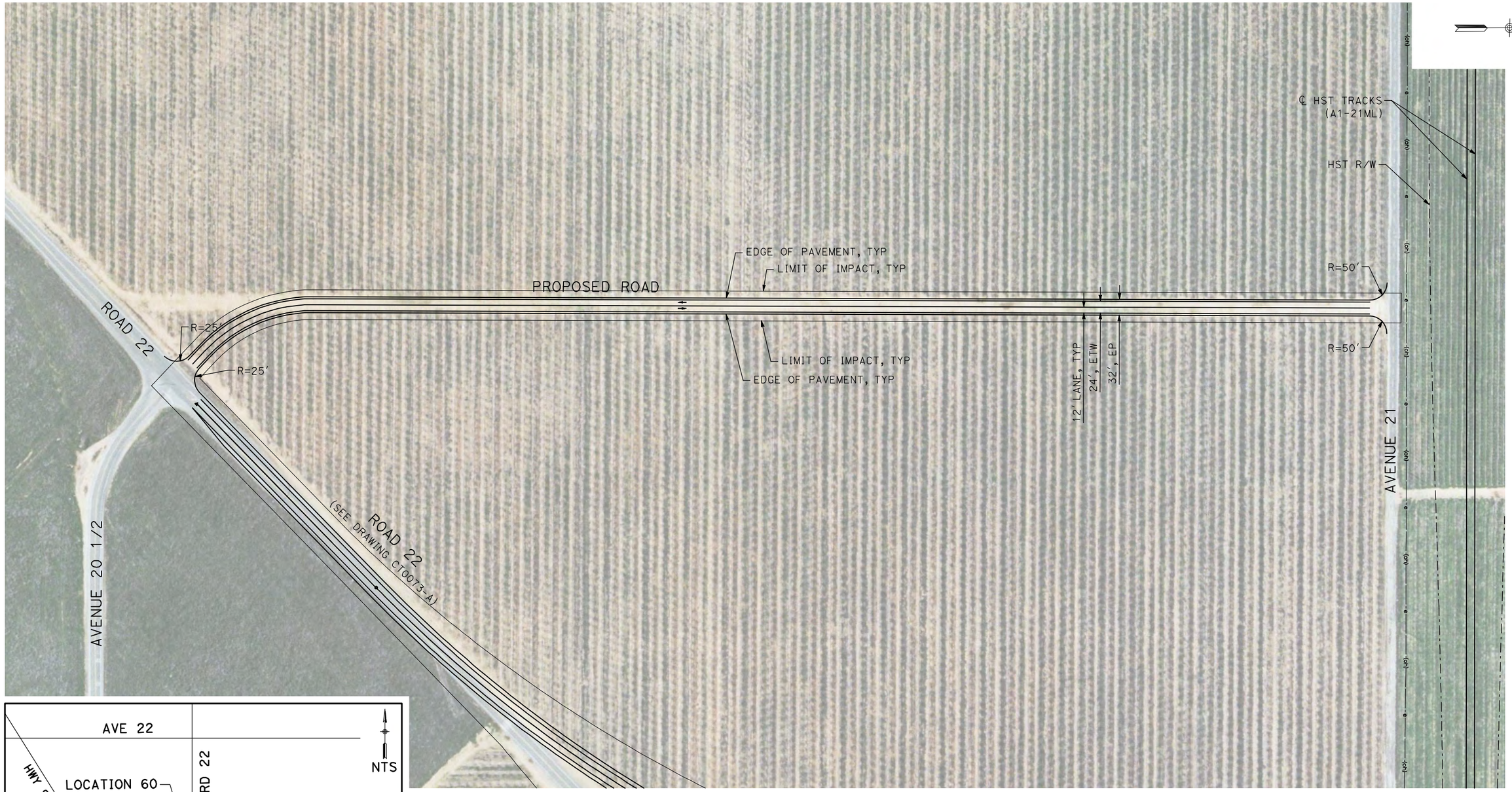

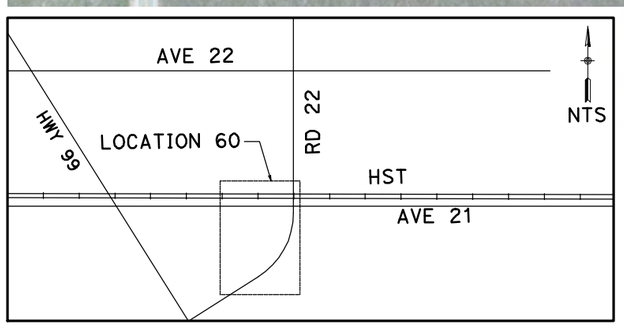

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GRAPHIC SCALE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (AVE 21 HYBRID)
LOCAL ROAD - ROAD 22
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HST06-007
DRAWING NO. CR4015-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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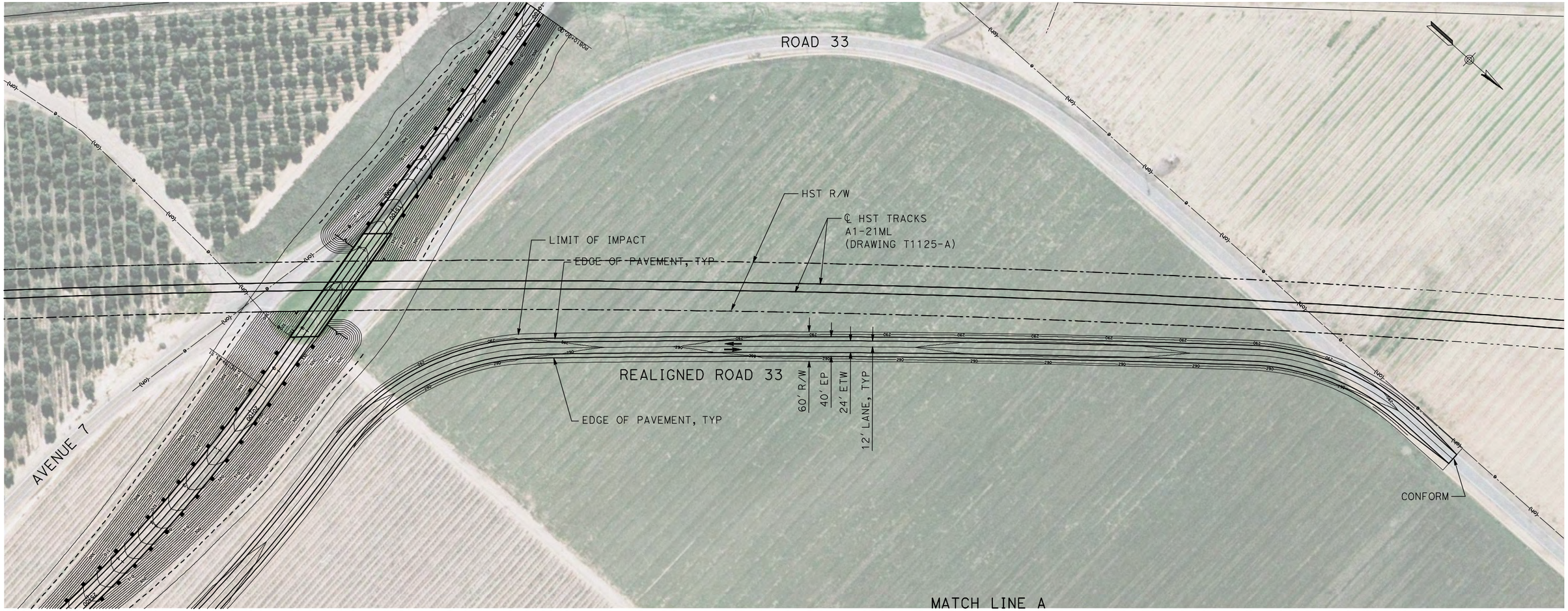
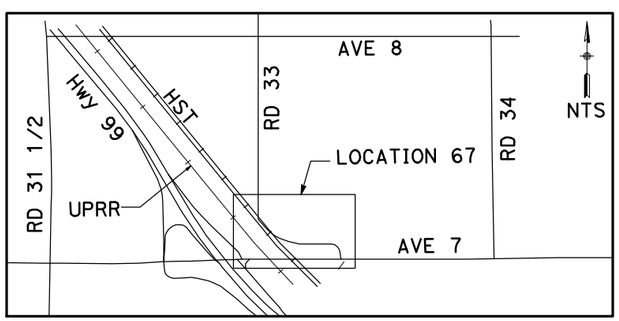
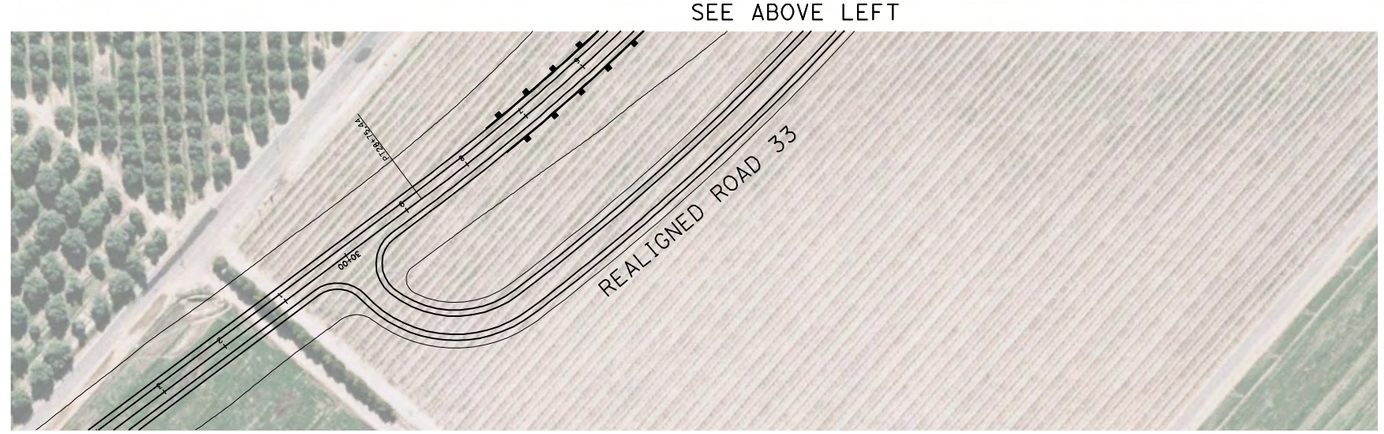
GibsonR1







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GRAPHIC SCALE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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2020 L Street, Suite 300
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MERCED CONNECTION - (AVE 21 HYBRID)
LOCAL ROAD - ROAD 33
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HST06-007
DRAWING NO. CR4018-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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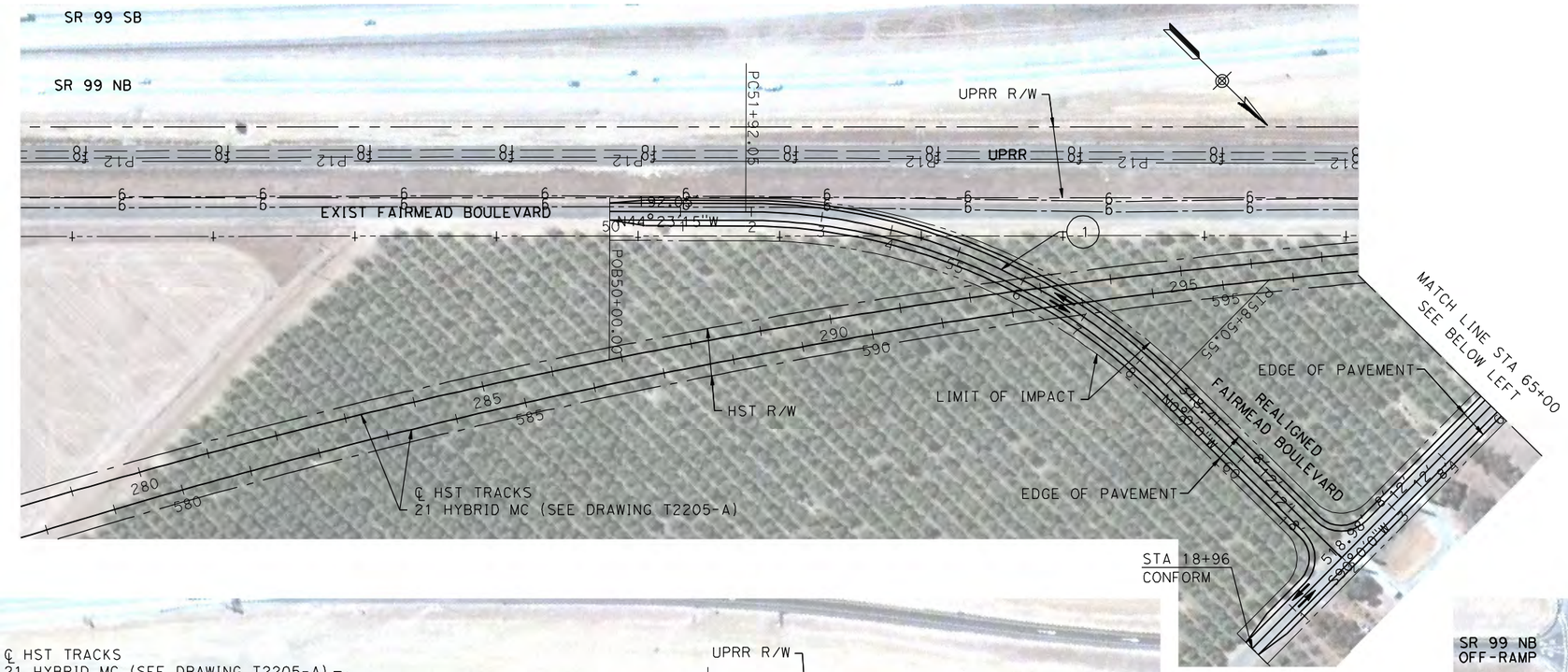
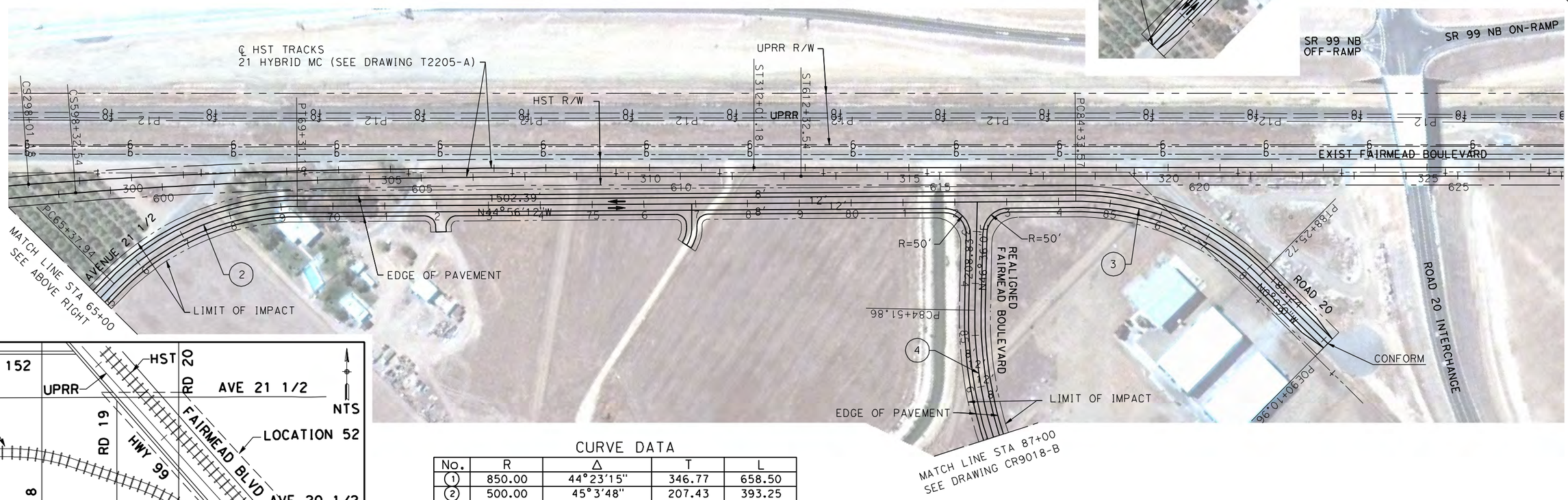
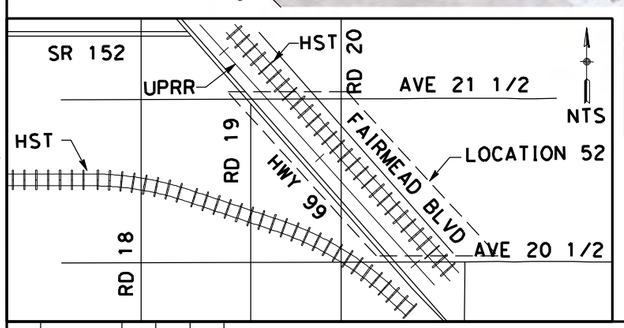
GibsonR1







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2	500.00	45°3'48"	207.43	393.25
3	500.00	44°56'12"	206.78	392.15
4	750.00	46°36'0"	323.00	609.99

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
FAIRMEAD BLVD
LAYOUT
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CR9017-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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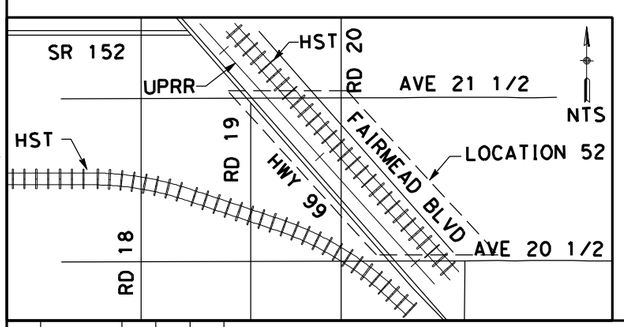

CURVE DATA

No.	R	Δ	T	L
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100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MERCED - (AVE 21 HYBRID)
FAIRMEAD BLVD
LAYOUT
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CR9018-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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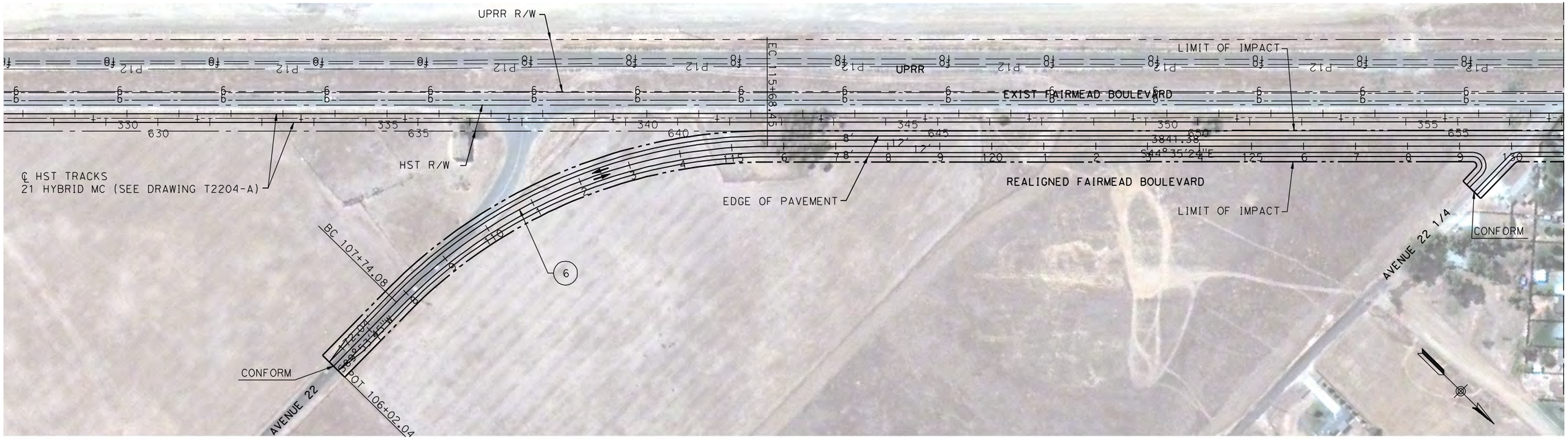

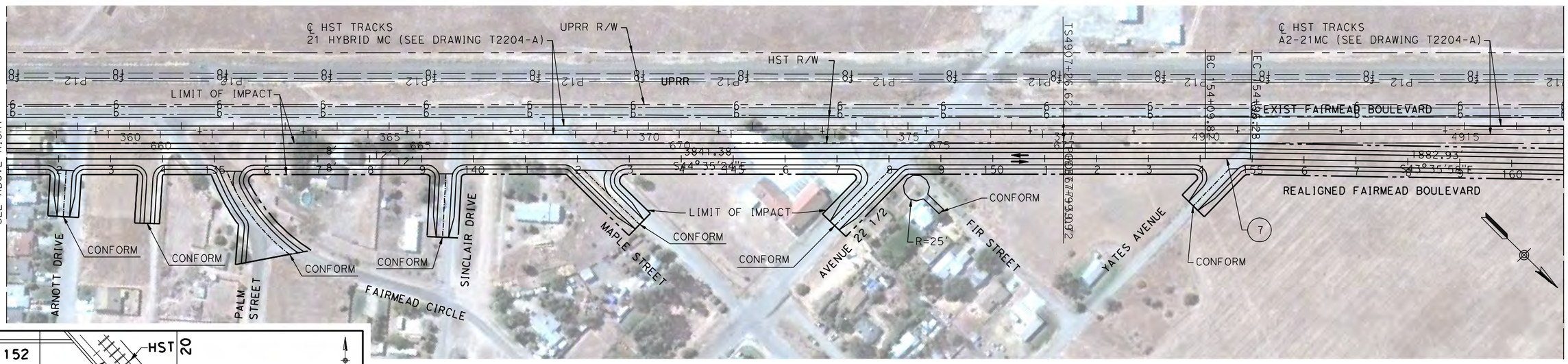

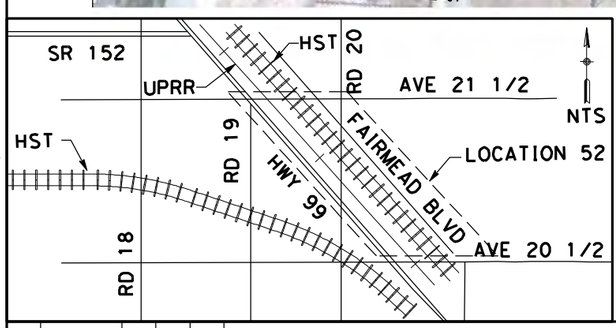

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H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
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IN CHARGE A. BOONE
DATE 06/30/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MERCED - (AVE 21 HYBRID)
FAIRMEAD BLVD
LAYOUT
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CR9019-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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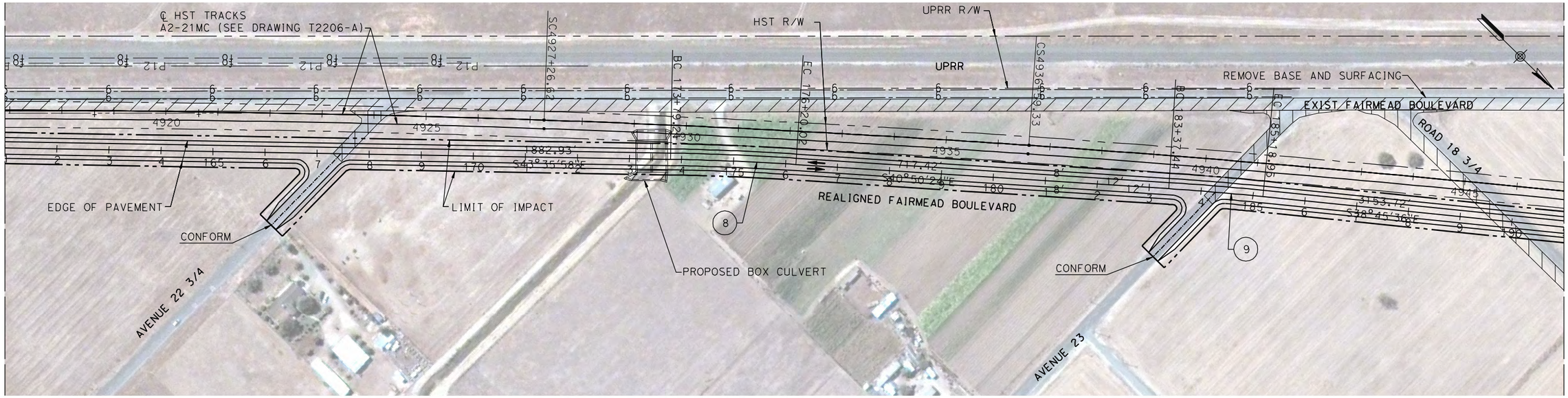

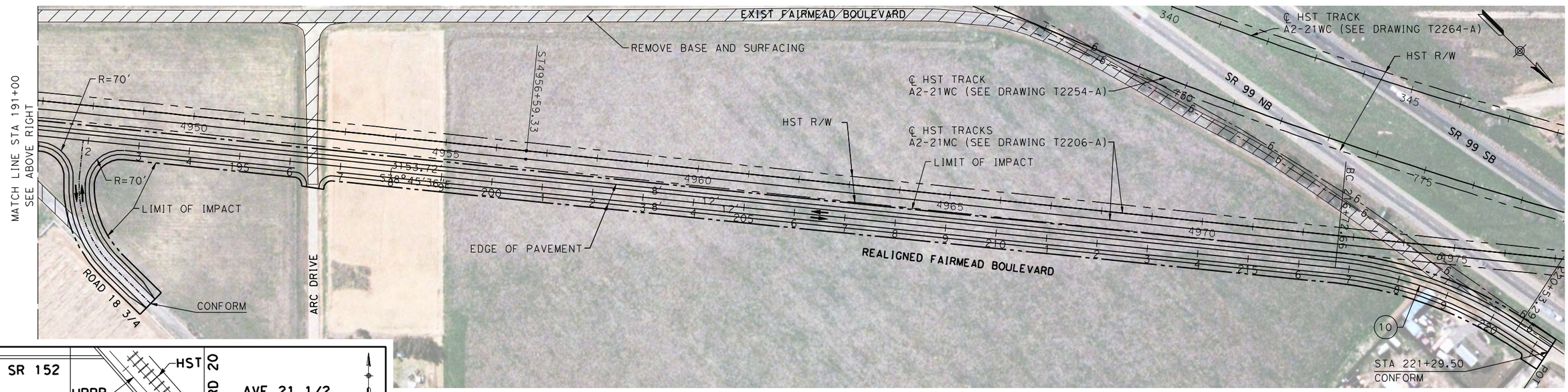

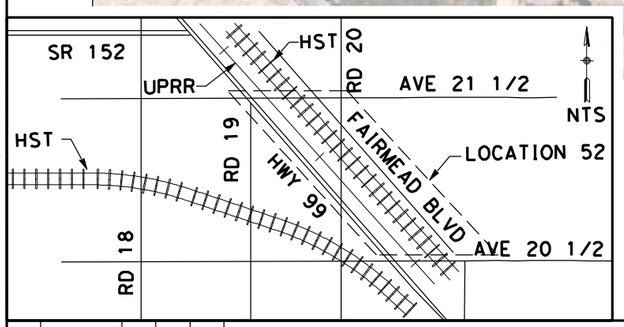

CURVE DATA

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100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE A. BOONE
DATE 06/30/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MERCED - (AVE 21 HYBRID)
FAIRMEAD BLVD
LAYOUT
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CR9020-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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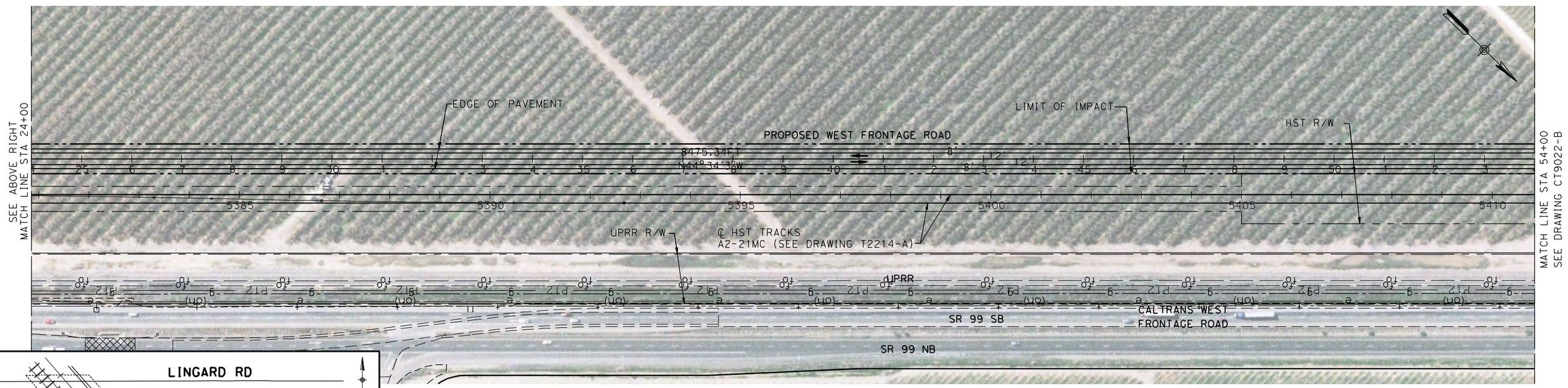

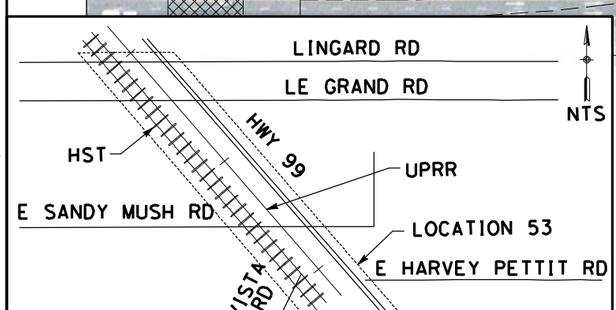

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

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Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 1 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9021-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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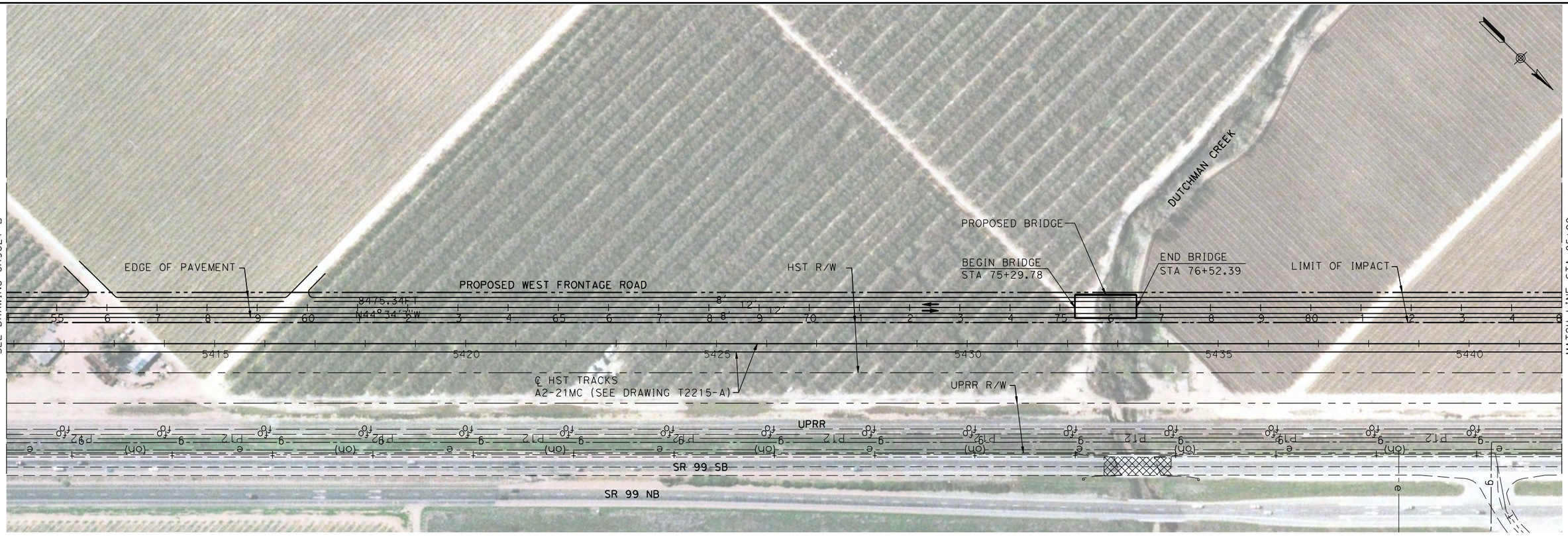

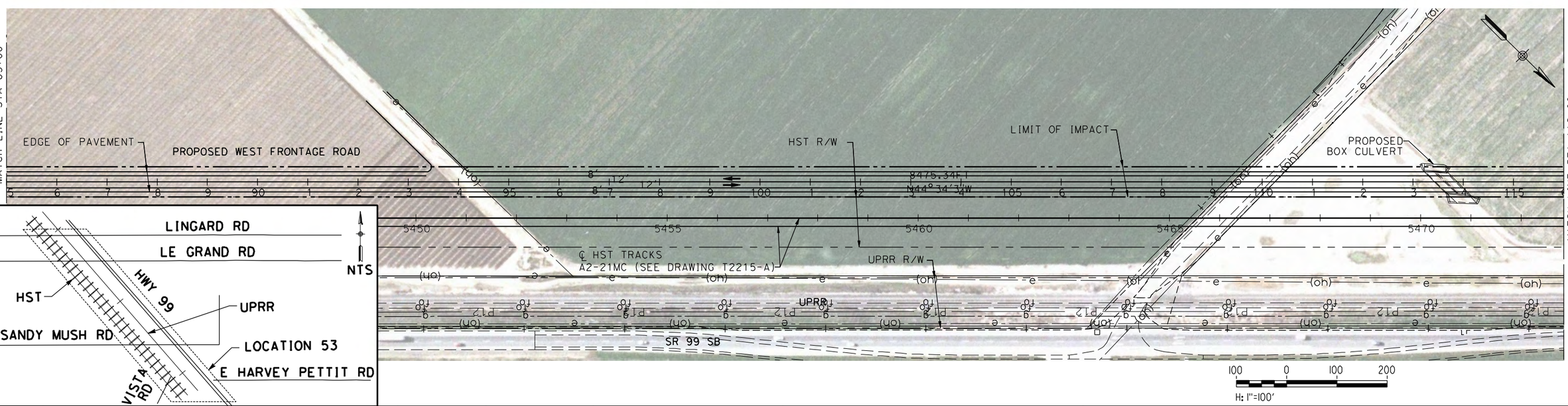

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 2 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9022-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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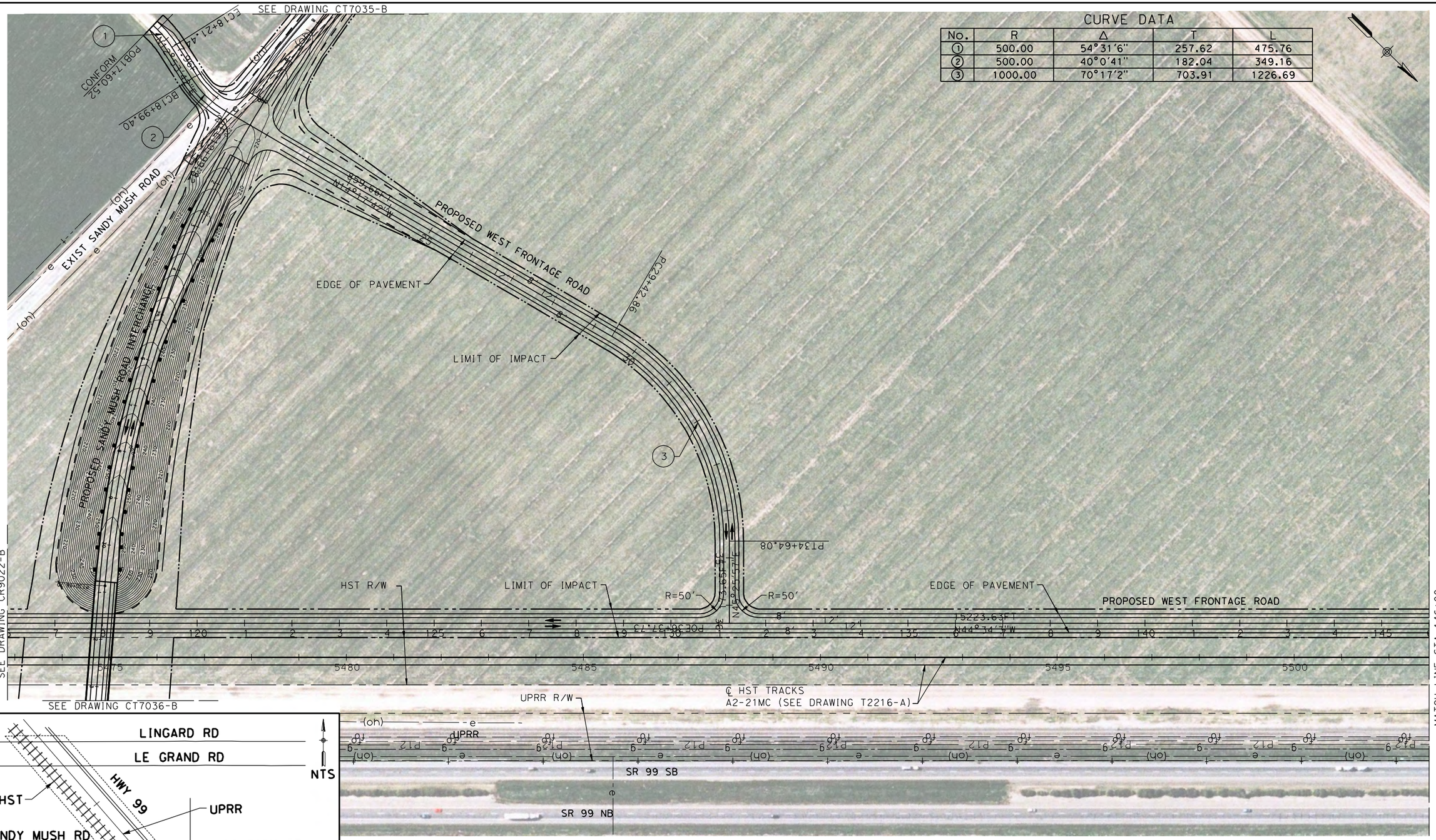

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 3 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9023-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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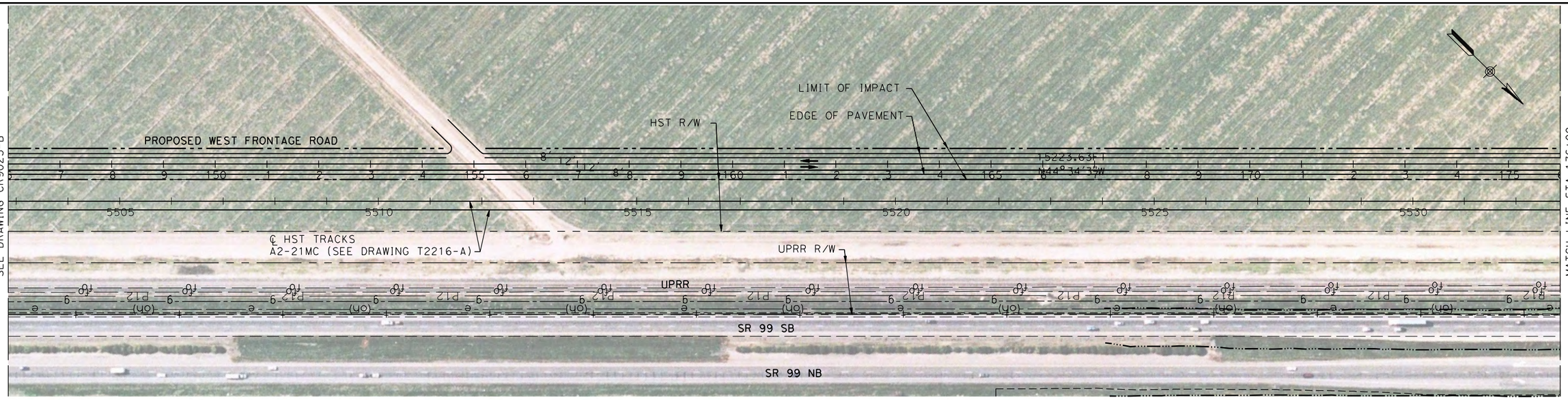

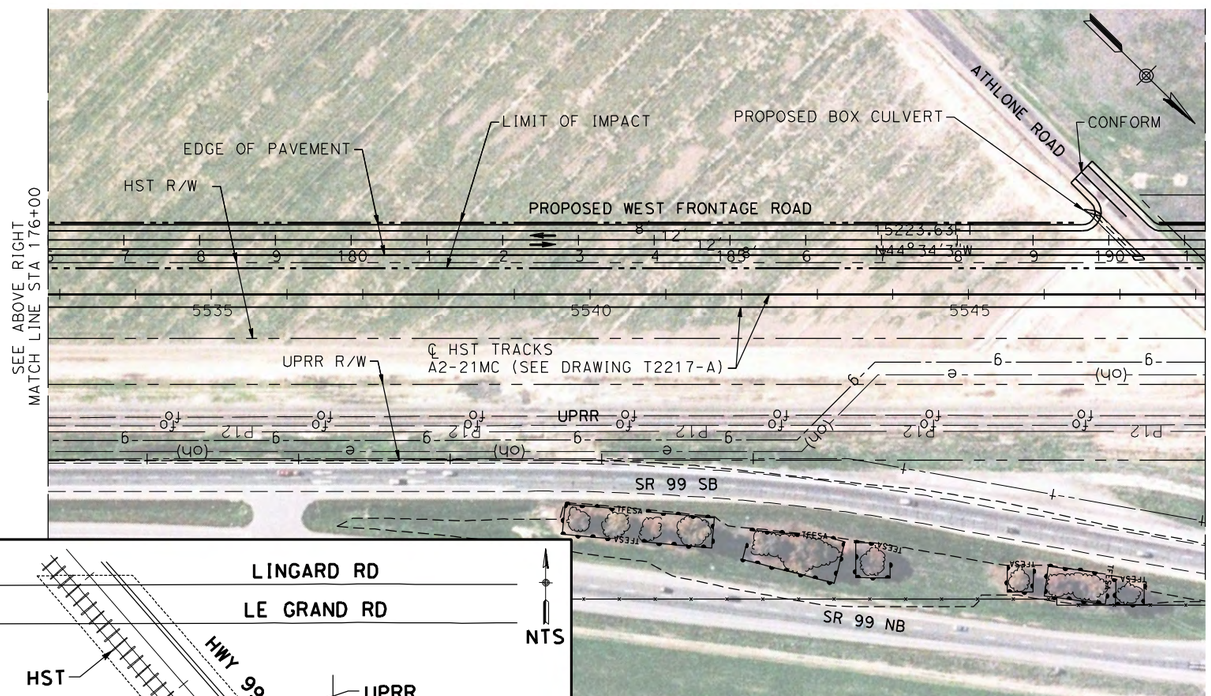

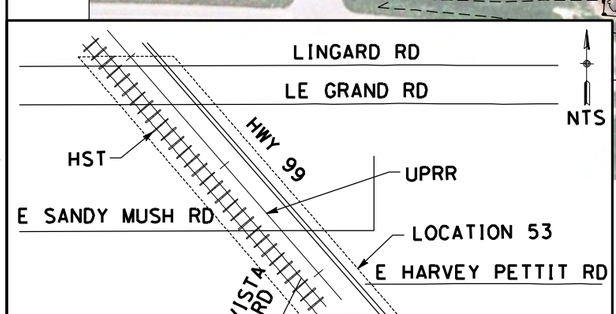

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 4 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9024-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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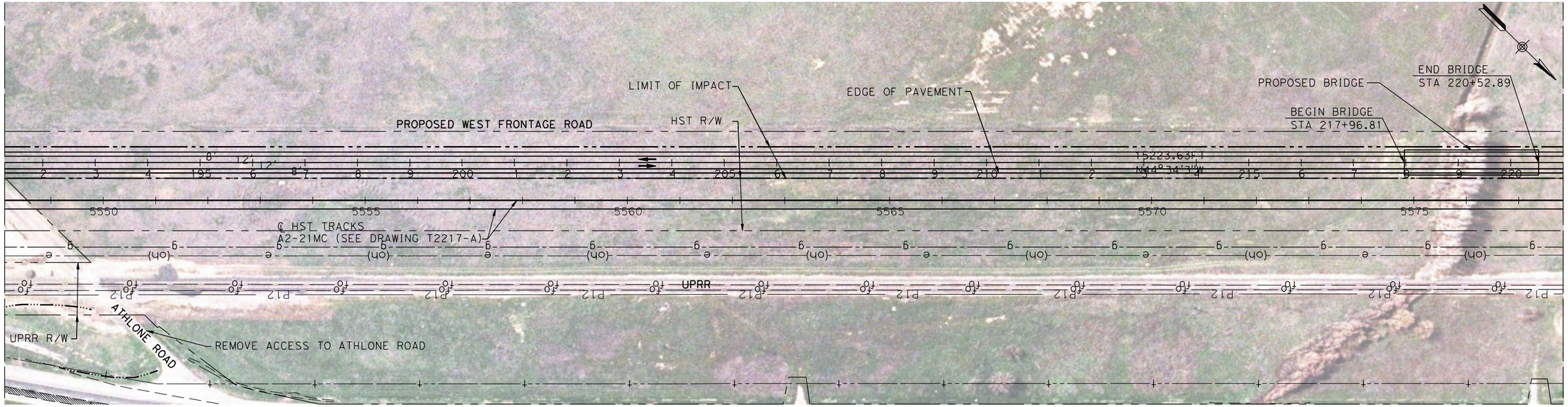

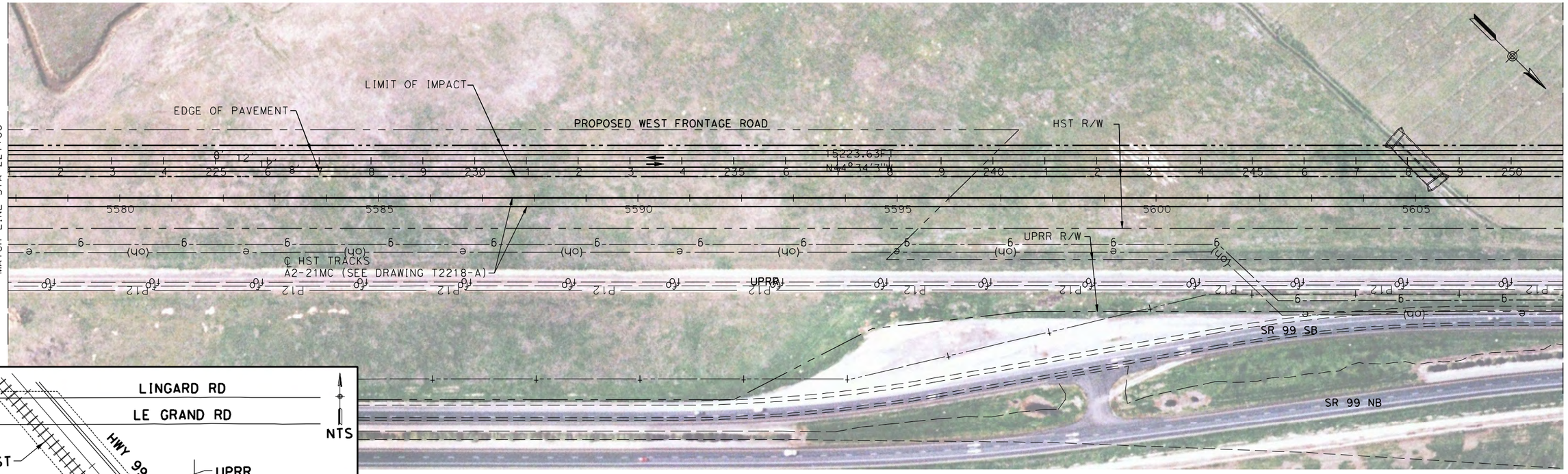

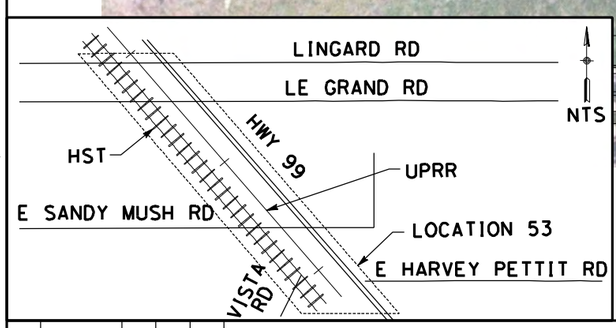

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 5 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9025-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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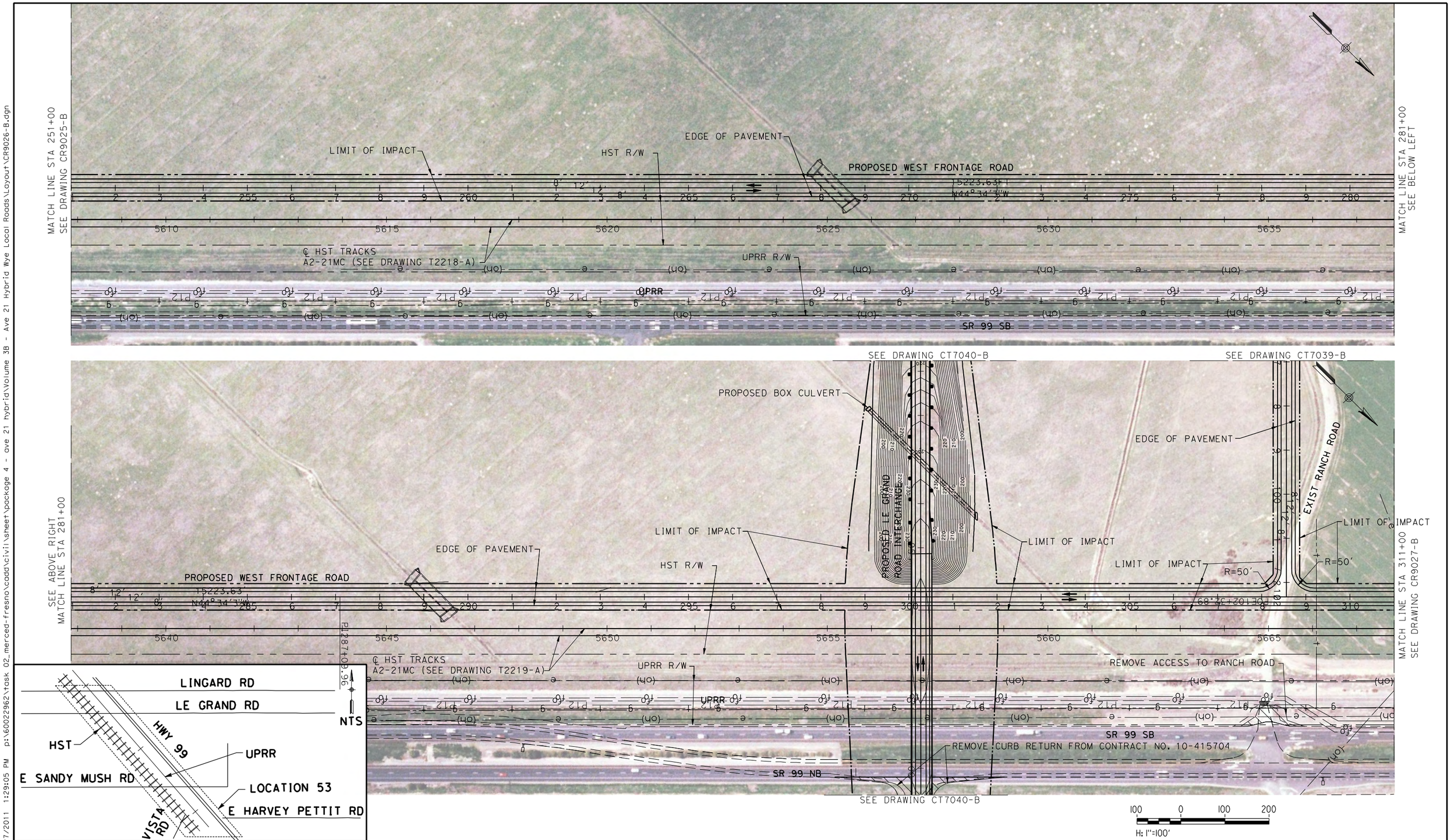

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 6 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9026-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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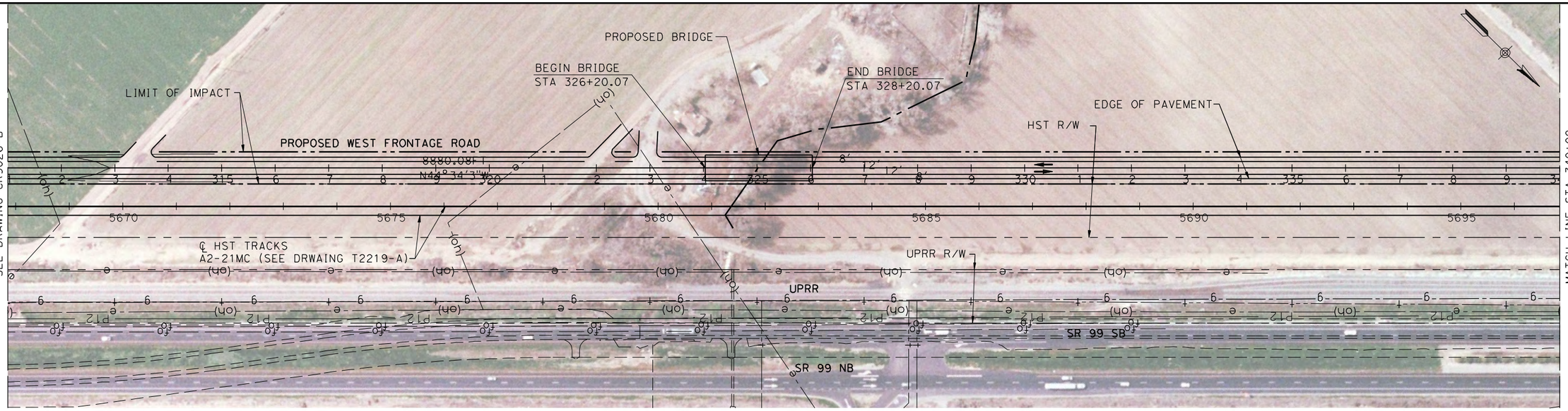

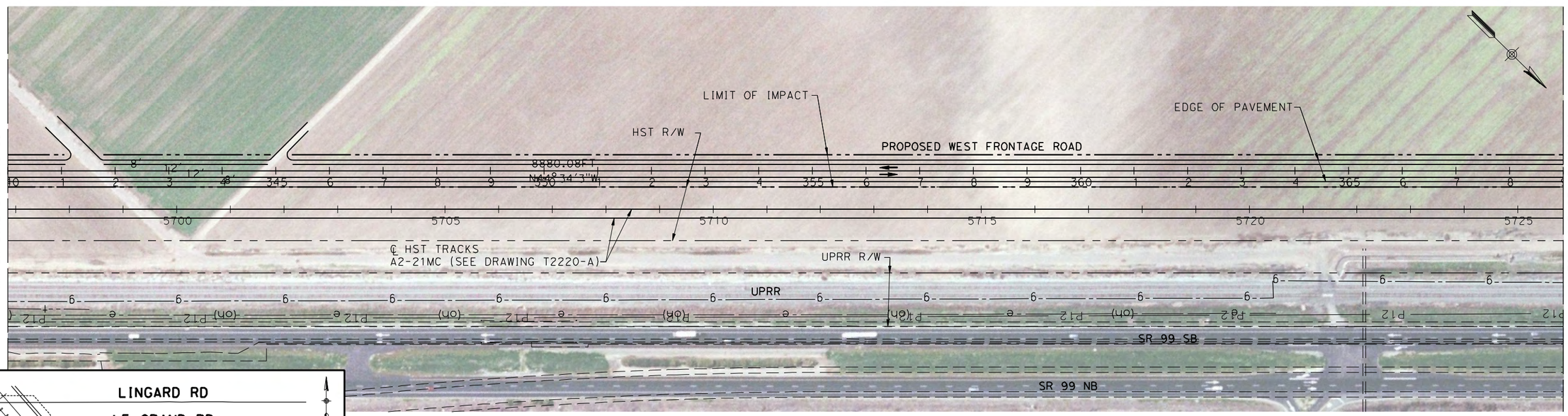

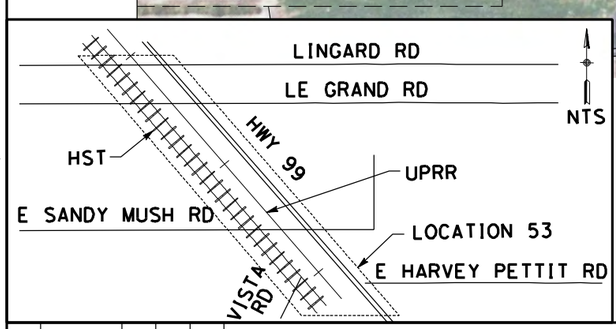

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 7 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9027-B
SCALE AS SHOWN
SHEET NO. ### OF ###

6/27/2011 1:29:26 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 4 - ave 21 hybrid\Volume 3B - Ave 21 Hybrid Wye Local Roads\Layout\CR9027-B.dgn
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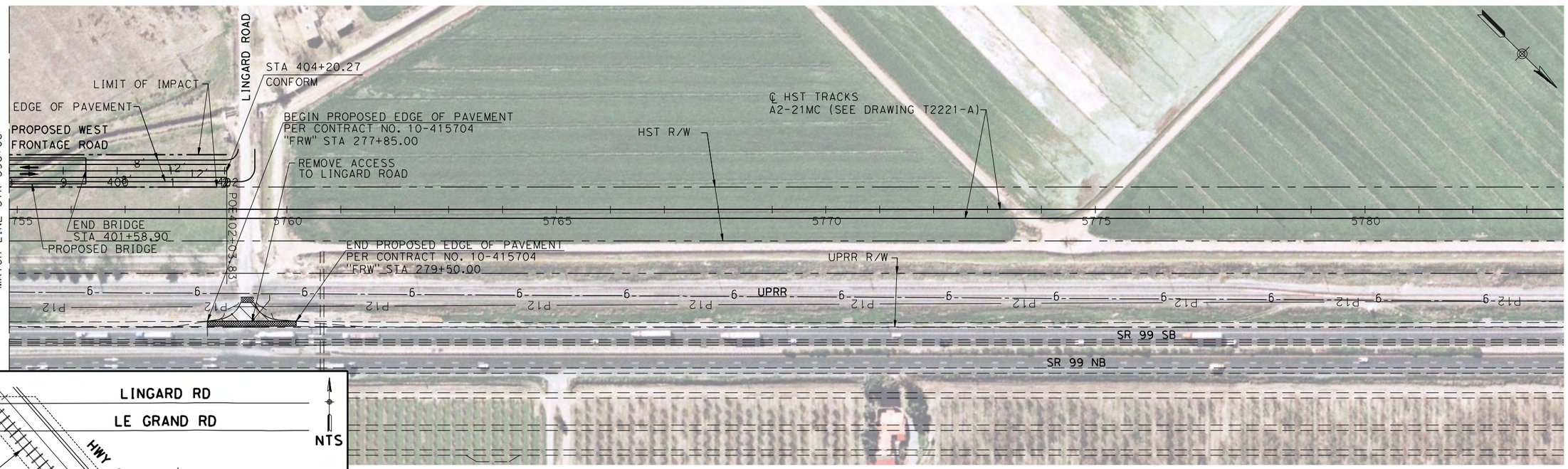

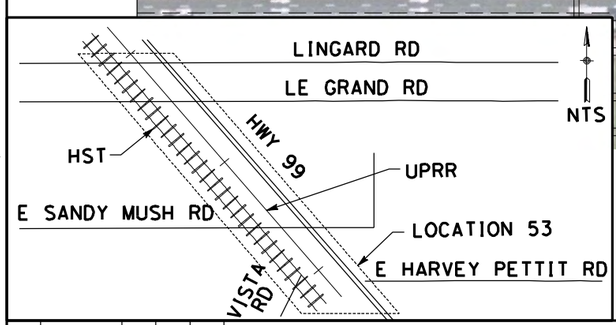

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
PROPOSED WEST FRONTAGE ROAD
LAYOUT
SHEET 8 OF 8

CONTRACT NO. HSR06-007
DRAWING NO. CR9028-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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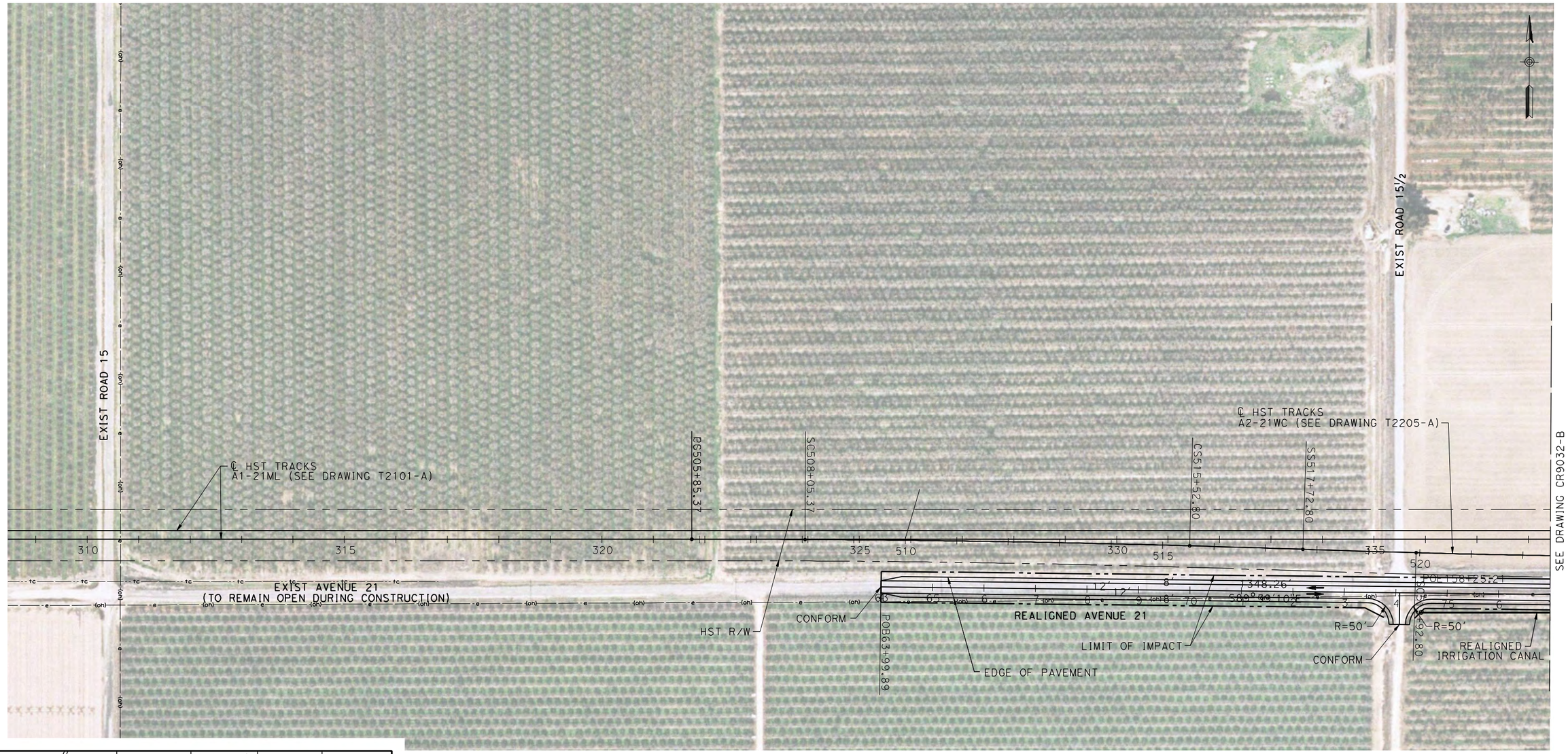

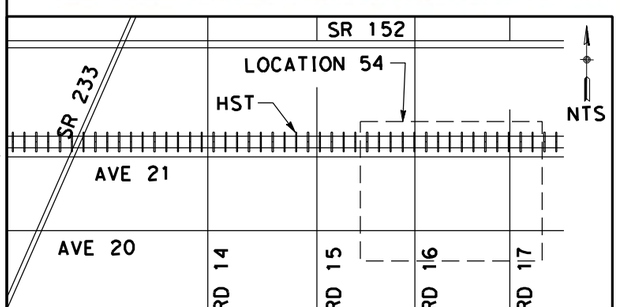

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
AVENUE 21
LAYOUT
STA 63+99.89 TO STA 77+00

CONTRACT NO. HSR06-007
DRAWING NO. CR9029-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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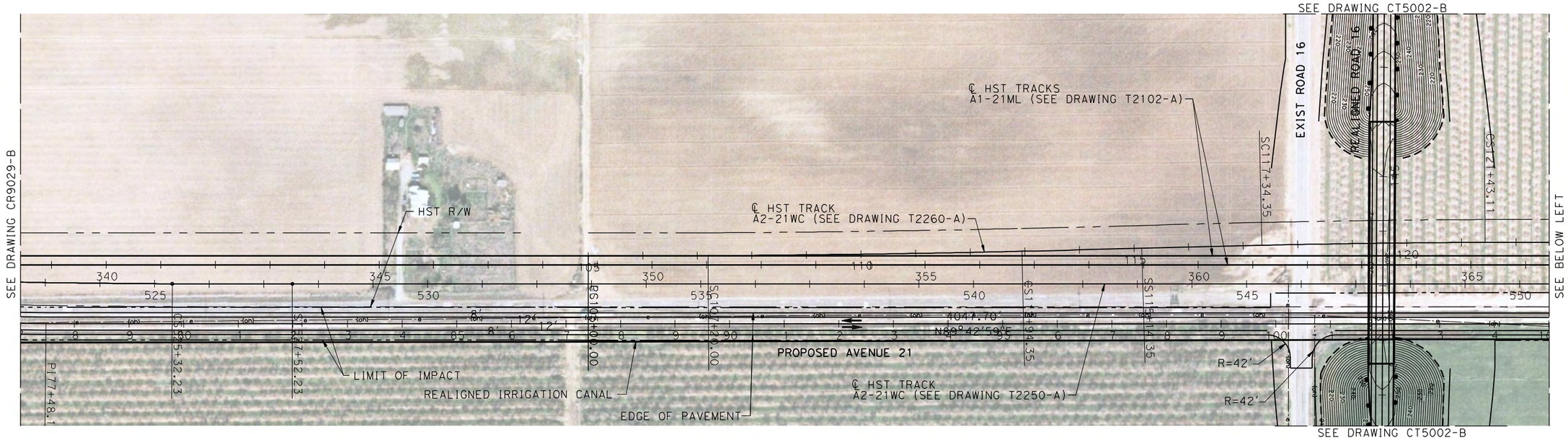

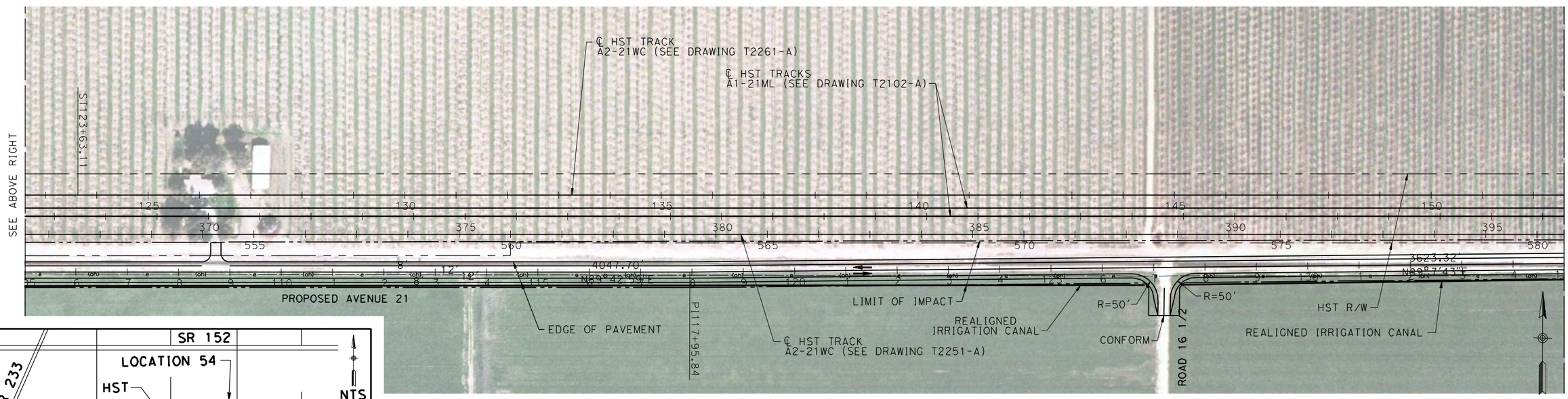

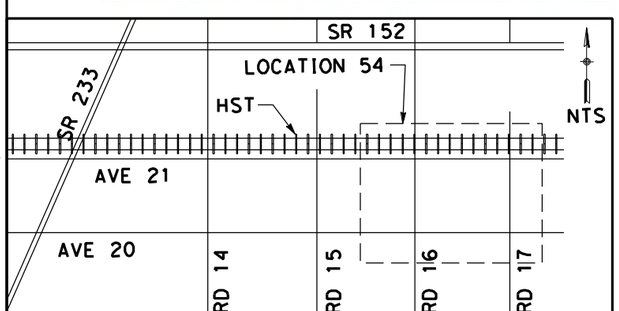

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
AVENUE 21
LAYOUT
STA 77+00 TO STA 135+00

CONTRACT NO. HSR06-007
DRAWING NO. CR9032-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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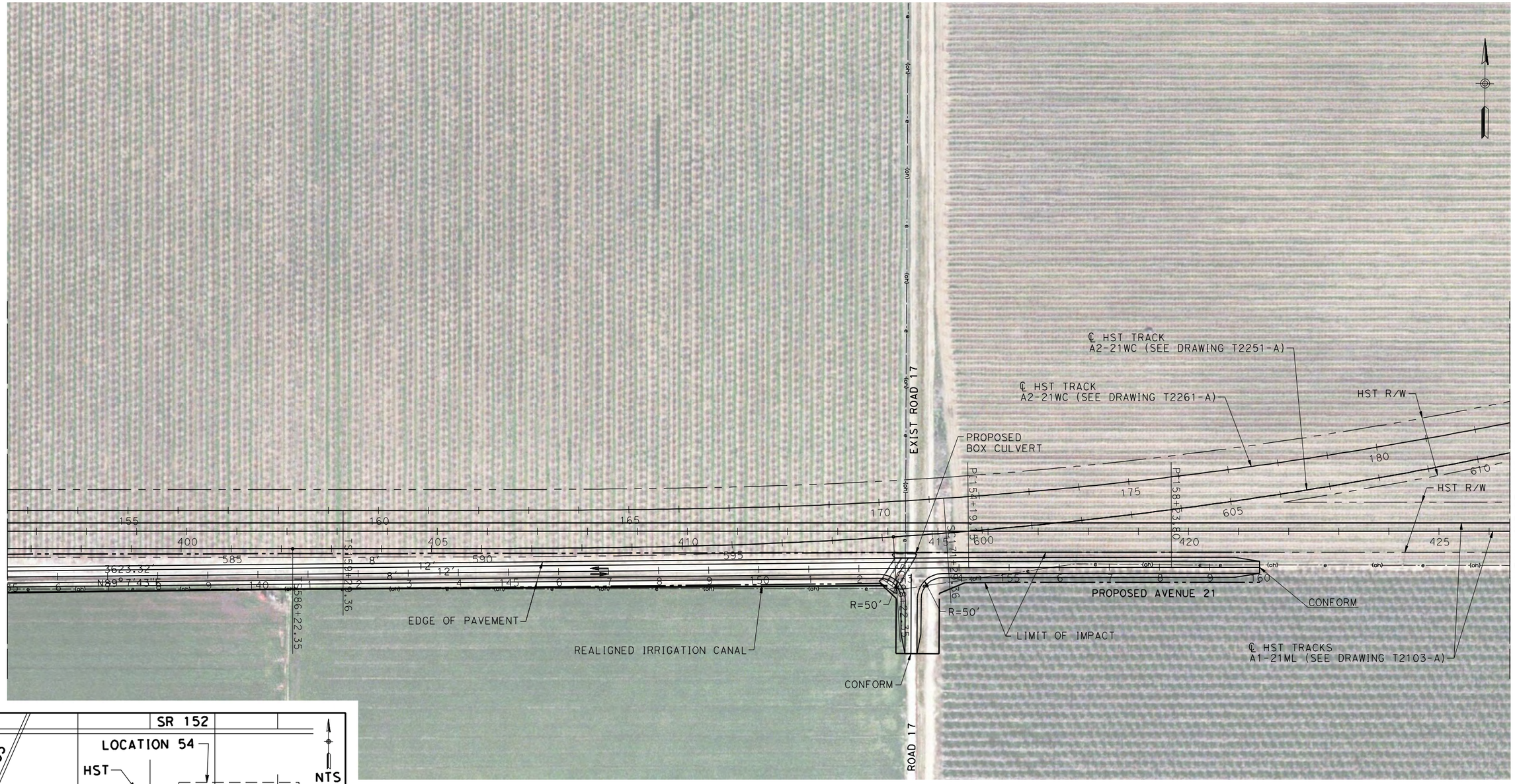

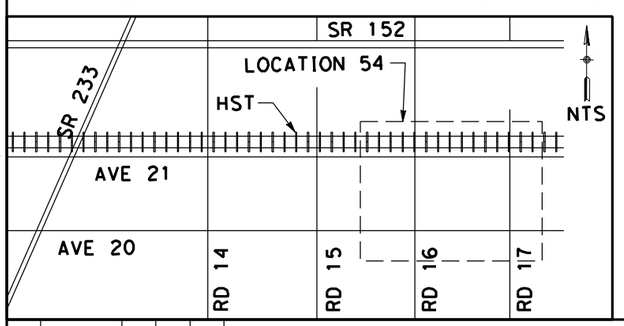

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
AVENUE 21
LAYOUT
STA 135+00 TO STA 160+00

CONTRACT NO. HSR06-007
DRAWING NO. CR9033-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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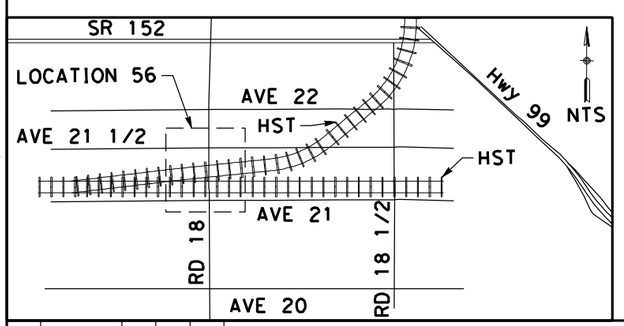

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
ROAD 18
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. CR9035-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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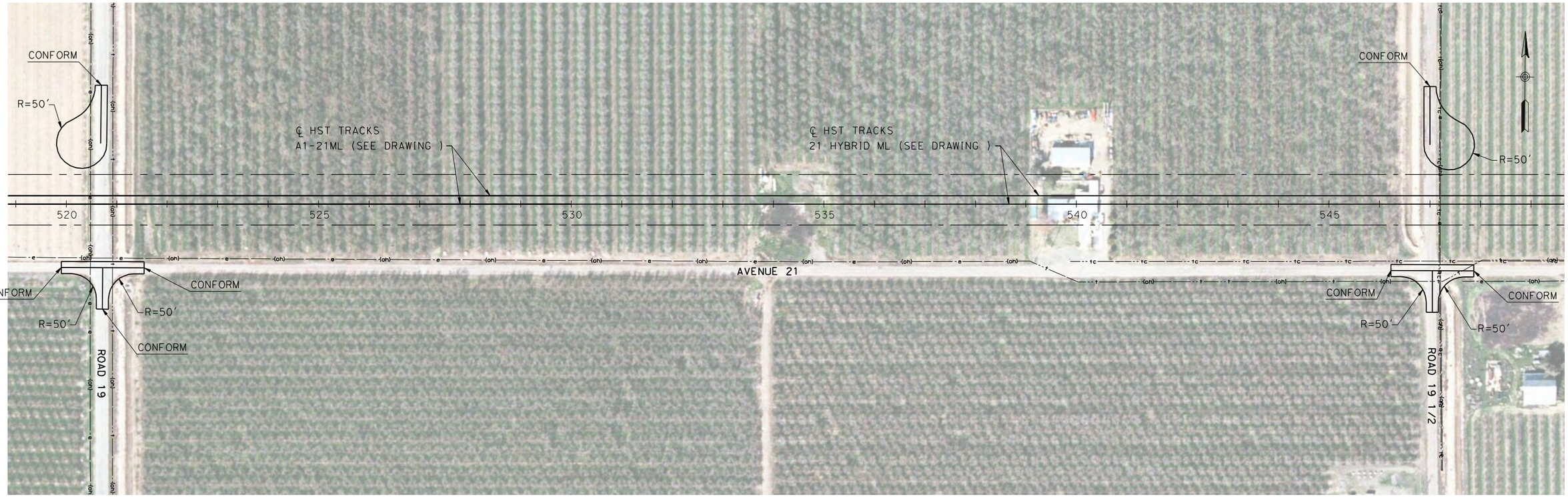

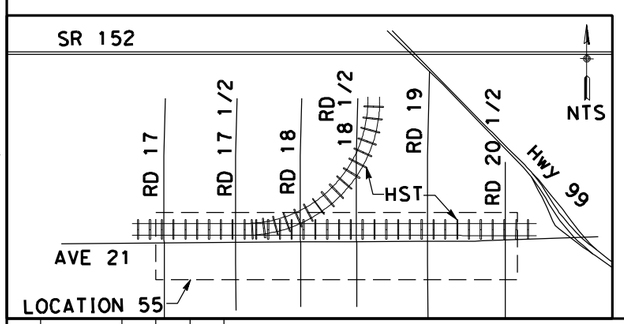

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAINLINE - (AVE 21 HYBRID)
ROAD 19 & ROAD 19 1/2
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. CR9040-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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ayelea

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. AYELE
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
HEALY ROAD
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. CR9041-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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ayeled

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. AYELE
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

UPRR/SR99 MERCED - (AVE 21 HYBRID)
GERARD AVENUE/CALTRANS FRONTAGE ROAD
LAYOUT

CONTRACT NO. HSR06-007
DRAWING NO. CR9042-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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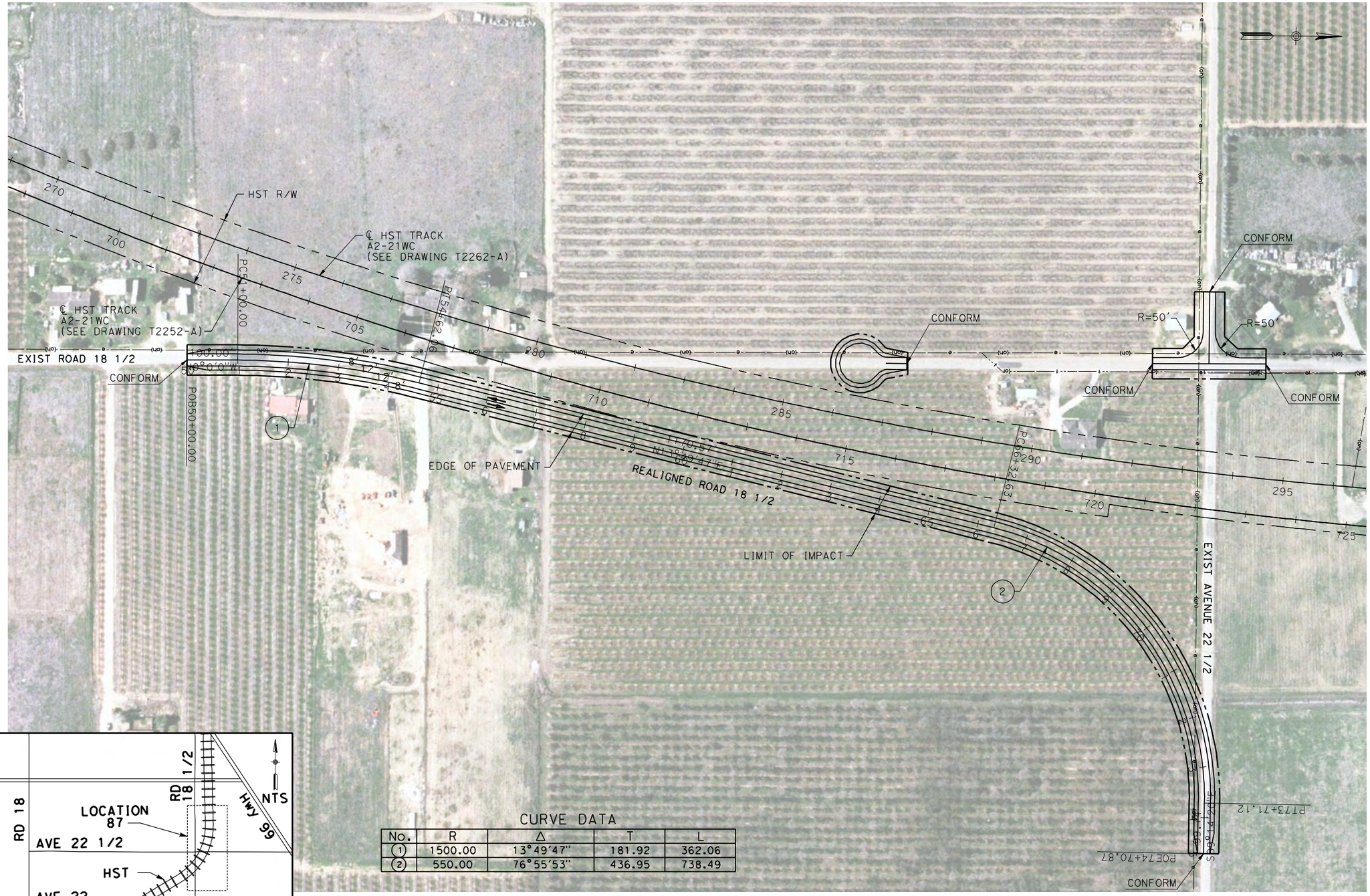

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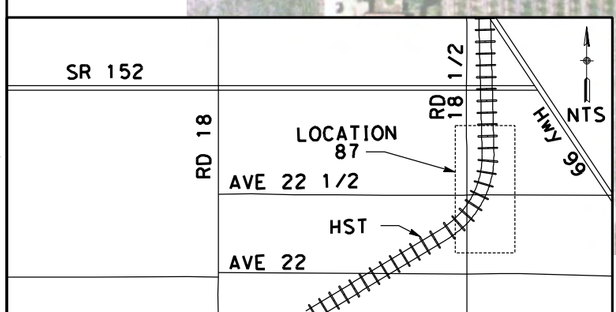

100 0 100 200
H: 1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 06/30/2011

RECORD SET
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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 MAINLINE/WYE - (AVE 21 HYBRID)
ROAD 18 1/2
LAYOUT
STA 50+00 TO STA 74+07.87

CONTRACT NO. HSR06-007
DRAWING NO. CR9043-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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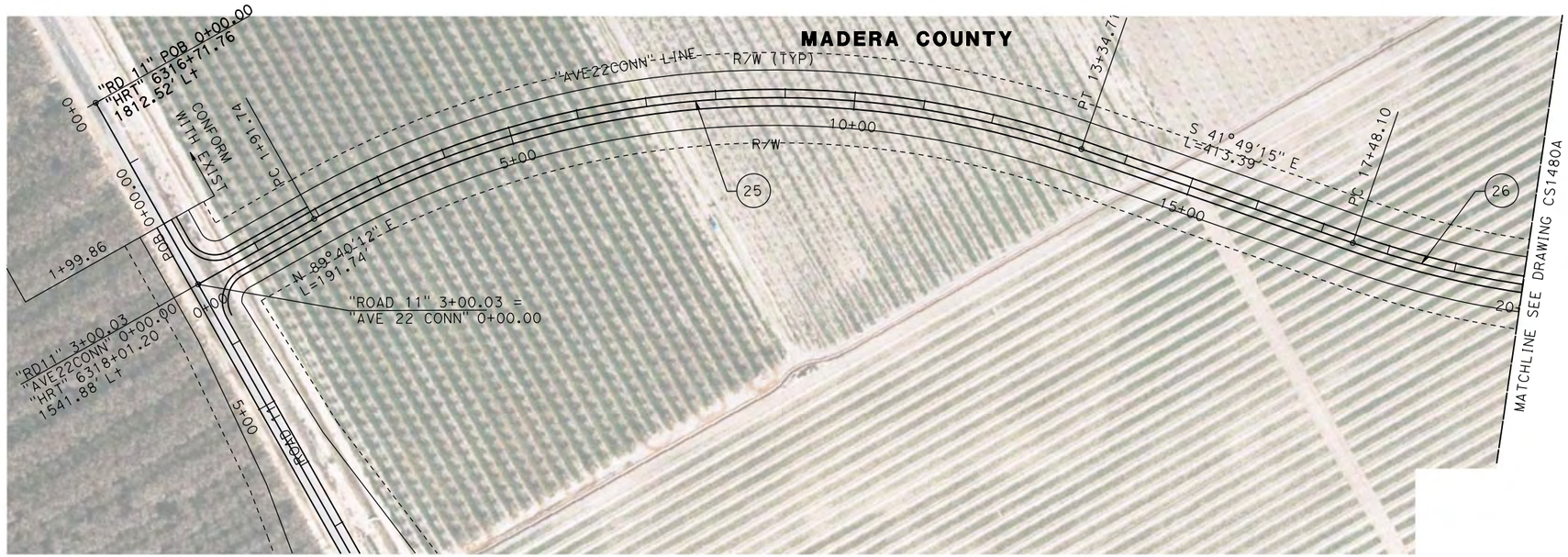
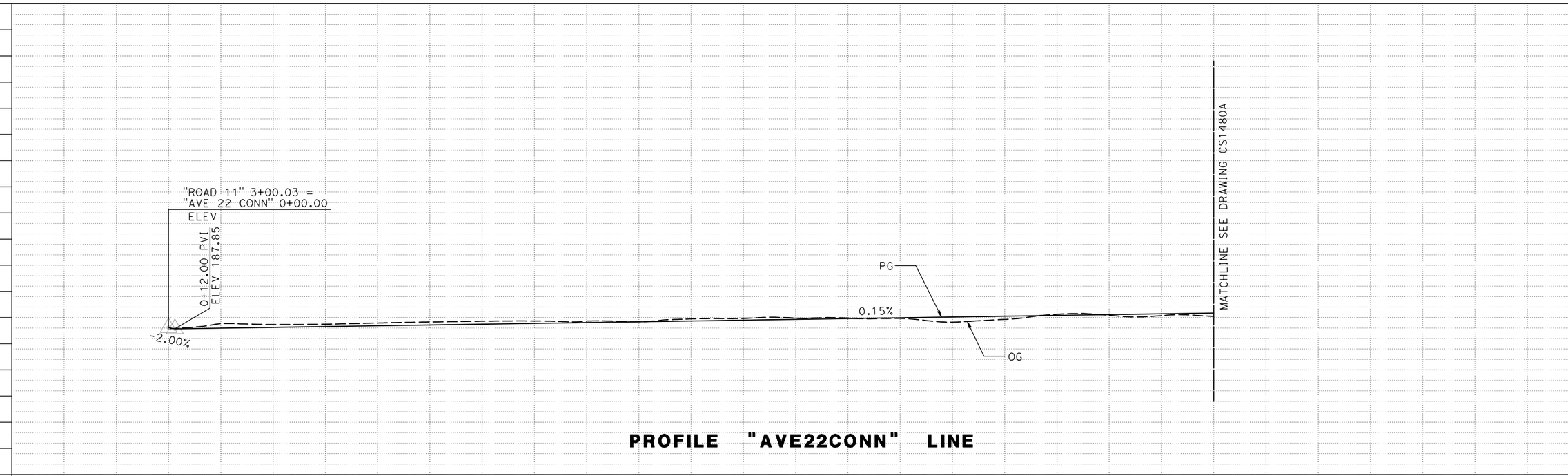


PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "AVE22CONN" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR152/AVENUE 21
AVENUE 22 CONNECTOR TO ROAD 11
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CR1479A
SCALE AS SHOWN
SHEET NO. 1 OF 2

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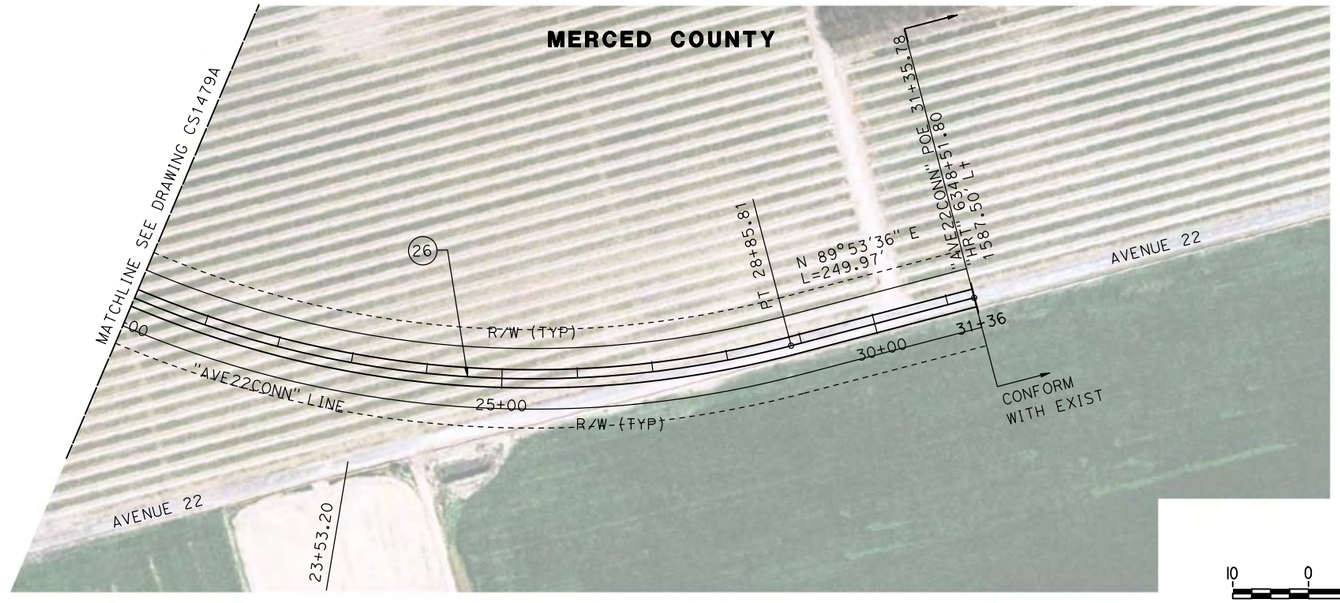
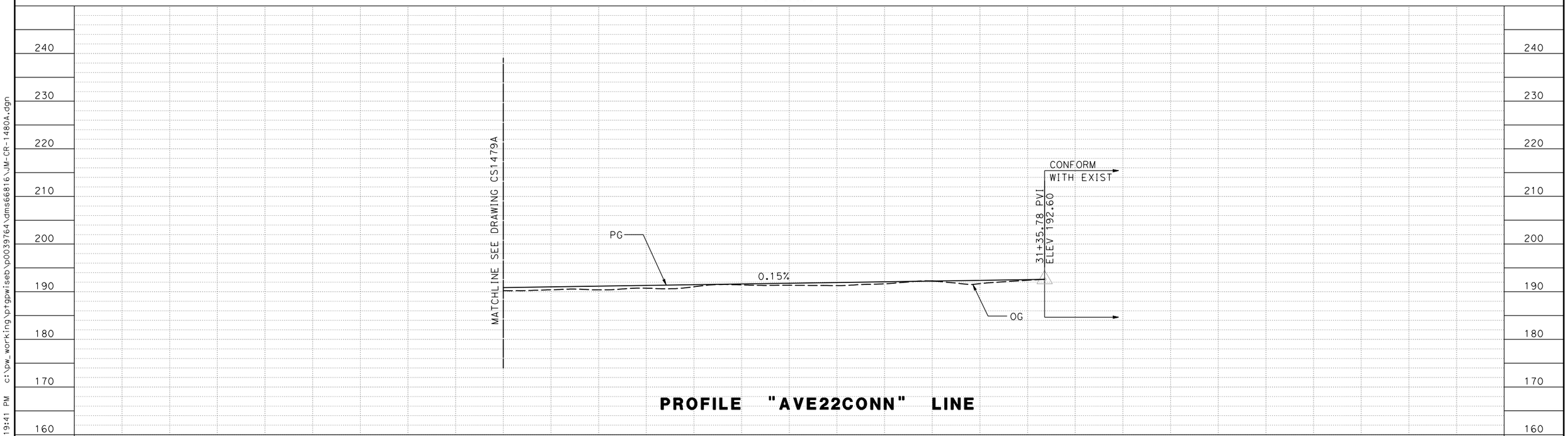


PLAN

10 0 10 20 — VERT: 1"=10'

100 0 100 200 — HORIZ: 1"=100'



PROFILE "AVE22CONN" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR152/AVENUE 21
AVENUE 22 CONNECTOR TO ROAD 11
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CR1480A
SCALE AS SHOWN
SHEET NO. 2 OF 2

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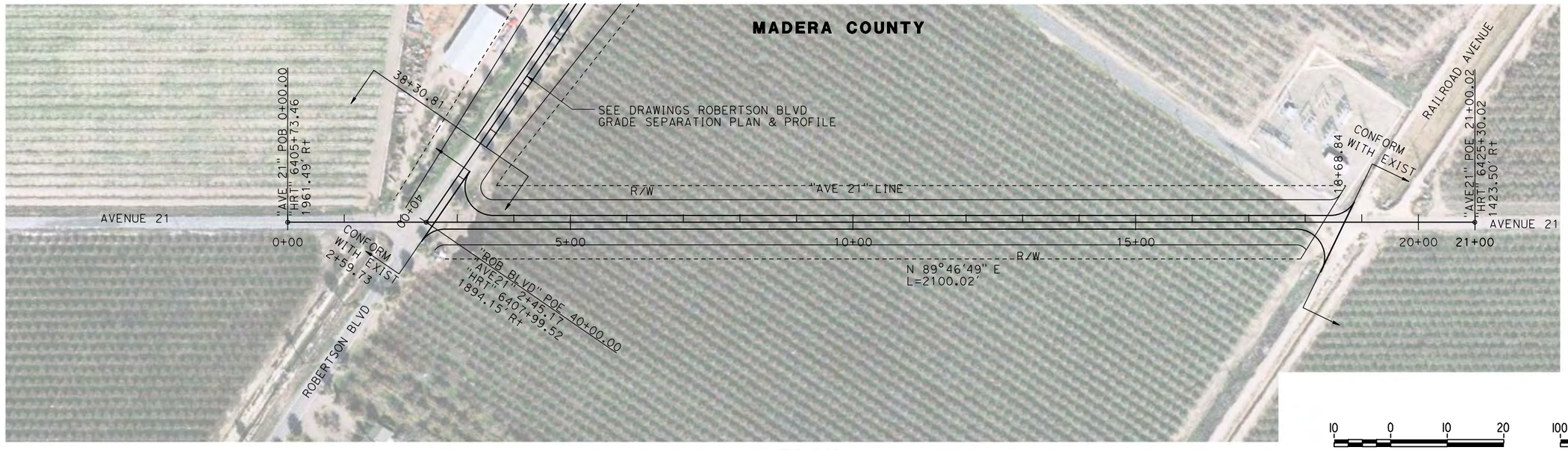
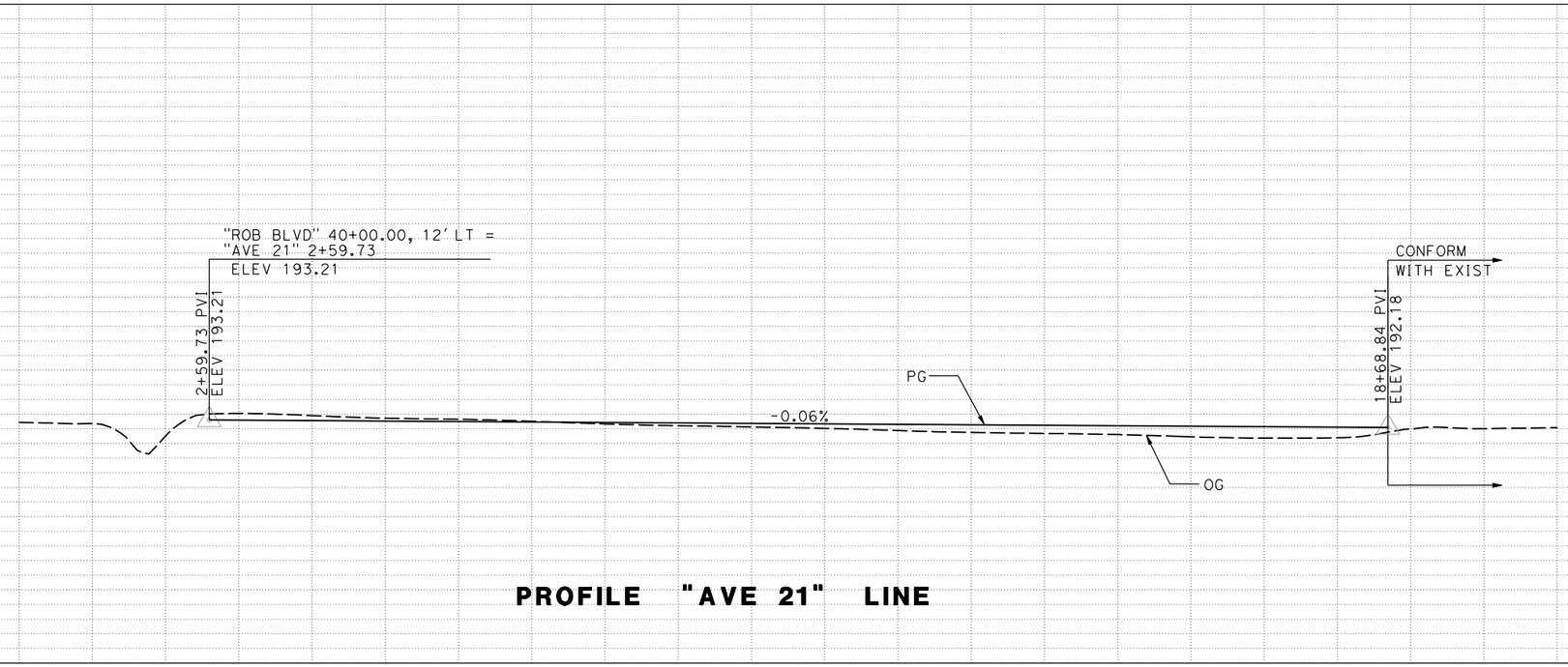


PLAN

VERT: 1"=10' HORIZ: 1"=100'



PROFILE "AVE 21" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY P. JACOBY
DRAWN BY ALBERT S.
CHECKED BY RESHMA C.
IN CHARGE D. WEMMER
DATE 4/15/2011

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

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PARSONS

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 24/SR152/AVENUE 21
AVENUE 21
PLAN AND PROFILE

CONTRACT NO. HSR08-05
DRAWING NO. CR1483A
SCALE AS SHOWN
SHEET NO. 1 OF 1

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